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Dr George Hood Smith

A SECOND VISIT

TO

THE UNITED STATES

OF

NORTH AMERICA.

BY SIR CHARLES LYELL, F.R.S.,

PRESIDENT OF THE GEOLOGICAL SOCIETY OF LONDON, AUTHOR OF "THE PRINCIPLES OF GEOLOGY," AND "TRAVELS IN NORTH AMERICA."

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A SECOND VISIT

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CHAPTER I.

Voyage from Liverpool to Halifax.—Gale.—Iceberg.—Drift Ice and Gulf Stream.—Coast of Newfoundland.—Engine-room of Steamer.—Conversations on Coolies in the West Indies.—Halifax.—News of Judge Story's Death.—Boston.—Success of the Mail Steam Packets.—Custom House Officers.

Sept. 4. 1845.—Embarked with my wife at Liverpool, in the Britannia, one of the Cunard line of steam-ships, bound for Halifax and Boston. On leaving the wharf, we had first been crammed, with a crowd of passengers and heaps of luggage, into a diminutive steamer, which looked like a toy by the side of the larger ship, of 1200 tons, in which we were to cross the ocean. I was reminded, however, by a friend, that this small craft was more than three times as large as one of the open caravels of Columbus, in his first voyage, which was only 15 tons burden, and without a deck. It is, indeed, marvelous to reflect on the daring of the early adventurers; for Frobisher, in 1576, made his way from the Thames to the shores of Labrador with two small barks of 20 and 25 tons each, not much surpassing in size the barge of a man-of-war; and Sir Humphry Gilbert crossed to Newfoundland, in 1583, in a bark of 10 tons only, which was lost in a tempest on the return voyage.

The morning after we set sail we found ourselves off Cork, in the midst of the experimental squadron of steamers and ships of the line, commanded by Sir Hyde Parker. They had been out several weeks performing their nautical evolutions, and we had the amusement of passing close to the largest ships of the fleet—the St. Vincent and the Superb. Our captain fired a salute as we went under the batteries of the last of these—the Admiral's ship.

After sailing at the rate of more than 200 miles a day for four days, our progress was retarded, Sept. 8, by an equinoctial gale, which came in from the southwest, and, blowing for twelve hours, raised such a sea, that we only made four miles an hour.

Another gale of still greater violence came on six days afterward, on the night of the 14th, when the ship was running at the rate of ten and a half miles an hour, along the eastern edge of the Great Bank. The wind had been N.E., when suddenly, and in an instant, it blew from the N.W. I was in my berth below when this squall struck the vessel, and supposed that we had run upon some floating timber or an iceberg. We felt the ship heel as if falling over. On inquiry next day of the captain, and the only passenger who was on deck at the time of this concussion, I learnt that they saw a cloud of white foam advancing toward them on the surface of the sea from the N.W., like a line of surf on a beach. The captain had time to get the sails hauled half up, all except the top-sail, which was torn to pieces, when the advancing line of foam reached the ship, at which moment there was some vivid lightning, which the passenger thought was the cause of the blow resembling the stroke of a solid body against the steamer. When the wind first filled the sails in an opposite direction, it seemed as if the masts must give way. All hands had been called on deck, and the men went into the rigging to furl the sails with the utmost order and coolness. In a few minutes the wind had veered rapidly round the compass, from N.W. to N.E., and then went on to blow from this, the old quarter again, a perfect hurricane for twenty-three hours; the spray being carried mast high, so that there was a complete mingling of sea and sky. We could never tell whether

the cloud which enveloped us consisted chiefly of the foam blown off the crests of the waves, or of the driving mist and rain which were falling during the greater part of the day.

Among our passengers were some experienced American sea-captains, who had commanded vessels of their own round Cape Horn, and, being now for the first time in a steamer at sea, were watching with professional interest the Britannia's behavior in the storm. They came to the conclusion, that one of these vessels, well appointed, with a full crew, skilled officers, and good engineers, was safer than any sailing packet; being light in their rigging, and having small sails, they run no danger of having their masts carried away in a stiff breeze, and the power of steam enables them always to make way, so as to steer and keep their head to the wind, on which safety depends. It sometimes happens, when a wave strikes a sailing vessel in a squall, that before she has time to work round and get her head to windward, another wave breaks over and swamps her, and to such an accident the loss of several packets between the United States and Liverpool is attributed.

I observed that there was no lightning conductor in our ship; and it seems to be the prevailing belief that steam-boats are less liable than other vessels to suffer from lightning, although the steamers in the royal navy are fitted with copper-wire rope conductors.

My chief amusement, when the weather was moderate, was to watch the porpoises (*Delphinus phocæna*) gamboling, rolling, and tumbling in the water, and yet keeping up with our ship when she was running eleven miles an hour. They were very numerous, usually following each other in a line at short intervals, each individual about four or five feet long, their backs of a blueish-black color, swimming without effort, and seeming scarcely to move either their fins or tail. Occasionally they dive, and then re-appear to take breath at a great distance, often leaping up out of the water, so as to display their silvery white bodies. The only other living creatures which attracted our attention, when still far from land, were enormous flights of sea-birds, which filled the air, or were seen swimming on the ocean near the shoal called

the Flemish Cap, lat. 47° 35′ N.; long. 44° 32′ W. They feed on fish peculiar to these comparatively shallow parts of the Atlantic.

But the event of chief interest to me on this voyage was beholding, for the first time in my life, a large iceberg. It came in sight on the 13th Sept., a season when they are rarely met with here. We were nearing the Great Bank, which was about eight miles distant, the air foggy, so that I could only see it dimly through the telescope, although it was as white as snow, and supposed by the officers to be about 200 feet high. The foggy and chilly state of the atmosphere had led the captain to suspect the proximity of floating ice, and half-hourly observations had been made on the temperature of the sea, but the water was always at 49° F., as is usual in this month. We were then in lat. 47° 37′ N., long. 45° 39′ W., our latitude corresponding to that of the Loire in France.

To a geologist, accustomed to seek for the explanation of various phenomena in the British Isles and Northern Europe, especially the transportation of huge stones to great distances, and the polishing and grooving of the surfaces of solid rocks, by referring to the agency of icebergs at remote periods, when much of what is now land in the northern hemisphere was still submerged, it is no small gratification to see, for the first time, one of these icy masses floating so far to the southward. I learnt from our captain that last year, June 1844, he fell in with an iceberg aground at some distance from the land off Cape Race, on the S.E. point of Newfoundland, in lat. 46° 40′ N. It was of a square shape, 100 feet high, and had stranded in a sea of some depth; for its sides were steep, and soundings of fifty fathoms were obtained close to the ice. It was seen at the same spot ten days afterward by a brig. A military officer on board also tells me that last year, when he was in garrison in Newfoundland, an iceberg continued aground in the harbor of St. John's for a year, and they used to fire cannon-balls at it from the battery. There are, indeed, innumerable well-authenticated cases of these islands of floating ice having stranded on the great oceanic shoals S.E. of Newfoundland, even in places where the water is no less than

100 fathoms deep, the average depth over the Great Bank being from forty to fifty fathoms. That they should be arrested in their course is not surprising, when we consider that the mass of floating ice below water is eight times greater than that above; and Sir James Ross saw icebergs which had run aground in Baffin's Bay, in water 1500 feet deep. If we reflect on the weight of these enormous masses, and the momentum which they acquire when impelled by winds and currents, and when they are moving at the rate of several miles an hour, it seems difficult to over-estimate the disturbance which they must create on a soft bottom of mud or loose sand, or the grinding power they must exert when they grate along a shelf of solid rock overspread with a layer of sand.

Mr. Redfield of New York has lately published* a chart showing the positions of the icebergs observed in the North Atlantic during the last fifteen years, and it will be remarked, that they have been met with at various points between the 47th and 36th parallels of latitude, the most southern being that which Captain Couthuoy encountered, lat. 36° 10′ N., long. 39° W., a mile long and 100 feet high. This berg was on the extreme southern boundary of the gulf stream, which it had crossed against the direction of the superficial current, so as to get as far south as the latitude of the Straits of Gibraltar. In fact, these great ice-islands coming from the Greenland seas are not stopped by the gulf-stream, which is a mere superficial current of warmer water flowing in an opposite direction, but are borne along from N.E. to S.W. by the force of the arctic under-current, consisting of colder water, into which the icebergs descend to a great depth.

All the circumstances connected with the geographical outline of the coast, the shape of the sea-bottom, the oceanic currents, and the prevailing winds, although liable to be modified and greatly altered in the course of time, may continue nearly the same for the next ten thousand or twenty thousand years; and in that period thousands of bergs, occasionally charged with fragments of rock, and many of them running aground in a variety of places, will be conveyed in every century over certain tracts

* Amer. Journ. Science, vol. xlviii. 1844.

of the Atlantic, and in given directions. The natural course of oceanic currents transporting ice from polar regions is from N.E. to S.W.; the westerly inclination being due to the influence of the increased velocity of the diurnal rotation of the earth's surface as we proceed southward. Now it is a well-known fact, and one of great geological interest, which I had an opportunity of verifying myself in 1842,* that in Canada the polished surfaces of hard rocks exhibit those striæ and straight parallel grooves (such as are generally ascribed to glacial action) in a N.E. and S.W. direction, and the blocks called erratic have also traveled from N.E. to S.W. Their course, therefore, agrees, as Mr. Redfield has pointed out, with the normal direction of polar currents charged with ice, where no disturbing causes have intervened. In order to account for the phenomenon, we have to suppose that Canada was submerged at the time when the rocks were polished and striated by the grating of the ice on the ancient sea-bottom; and that this was actually the case, is proved by independent evidence, namely, the occurrence of marine shells of recent species at various heights above the level of the sea in the region drained by the St. Lawrence.† Professor Hitchcock has shown that, in Massachusetts, there is another system of striæ and grooves running from N.N.E. to S.S.W.; the boulders and transported blocks of the same region having taken a corresponding course, doubtless, in consequence of the floating icebergs having, in that case, been made by winds or currents, or the shape of the land and sea-bottom, to deviate from the normal direction.

Many of the icebergs annually drifted into southern latitudes in the Atlantic, are covered with seals, which are thus brought into very uncongenial climates, and probably are never able to make their way back again. They are often seen playing about the rocks on the shores of Massachusetts in summer, so that they seem able, for a time at least, to accommodate themselves to considerable heat.

Early on the morning of the 15th of September, the captain

* See "Lyell's Travels in North America," vol. ii. p. 135.
† Ibid. vol. ii. p. 143.

got sight of land, consisting of the hills near St. John's, Newfoundland, about forty miles distant. When we came on deck, we were running rapidly in smooth water along the shore, within four miles of Trespassey Bay. The atmosphere was bright, and we had a clear view of the rocky coast, which reminded me of some of the most sterile, cold, and treeless parts of Scotland. Not even a shrub appeared to vary the uniform covering of green turf; yet we were in a latitude corresponding to the South of France.

In a large steam-ship like the Britannia, there are three very distinct societies, whose employments during the voyage are singularly contrasted. There are the sailors, all of whom were fully occupied under their officers, for a time at least, during the gale, furling the sails and attending to the ordinary duties of a sailing ship. Then there is the saloon, where gentlemen and well-dressed ladies are seen lounging and reading books, or talking, or playing backgammon, and enjoying, except during a hurricane, the luxuries and expensive fare of a large hotel. In another spacious room, which I had the curiosity to visit after the storm, is a large corps of enginemen and firemen, with sooty faces and soiled clothes, pale with heat, heaping up coals on the great furnaces, or regulating the machinery. On visiting the large engine-room, we were filled with admiration at seeing the complicated apparatus, and the ease with which it moved, having never once stopped for a minute when traversing 3000 miles of ocean, although the vessel had been pitching and rolling, and sometimes quivering, as she was forced by the power of the steam against the opposing waves, and although the ship had sometimes heeled at a very high angle, especially when struck suddenly by the squall of the 14th. The engine is so placed near the center of the ship, that during a storm the piston is never inclined at a higher angle than twelve degrees, which does not derange the freedom of its motion. The Britannia, a ship of 1200 tons, has four large boilers; the engines having a 440 horse power. When she left Liverpool she had 550 tons of coals in her, and burned from thirty to forty tons a day, her speed augmenting sensibly toward the end of the voyage, as she grew lighter;

but, on the other hand, the vibration caused by the machinery increasing also, much to the discomfort of the passengers.

Among the wonders of the engine-room, no object made so lively an impression on my mind as a small dial, called the Indicator, where a hand, like that of a clock, moving round in a circle, registers the number of revolutions made by the wheels of the engine during the whole voyage; this hand or index being attached to one of the moving shafts, and made to advance slightly by every stroke. We were going at the time at the rate of ten and a half miles an hour, and the paddle-wheels were revolving fifteen and a half times a minute; but during the gale they had only made six or seven revolutions, the engineer, to avoid too great a strain on the machinery, having then burned much less coal, and going no more than half speed. Our shortest day's sail, during the whole voyage, was 114 miles. I observed, on our arrival at Boston, that the number of revolutions registered by the Indicator was 275,122, the ship having run 2946 miles in fourteen days and twenty-two hours; the distance from Liverpool to Halifax being 2550 miles, and from thence to Boston 396. For the sake of comparing this result with former voyages of the Britannia, I made the following extract from the Log Book of the chief engineer:—

		Number of Revolutions of the Engines.	Length of Voyage. Days.	Hours.
Outward Voyage, May, 1845		273,328	14	12
Homeward do. June, "		253,073	11	8
Outward do. July, "		282,409	18	13
Homeward do. August, "		292,122	14	2

It is remarkable how nearly the number of strokes made by the engine in our present voyage agrees with those recorded in the voyage of last May, which it will be seen was of the same length, with the exception of a few hours, the shorter voyage exhibiting a slight excess in the number of revolutions. In all the four trips, the difference between the highest and lowest numbers, amounts to no more than a seventh or eighth of the whole. It is like the regular pulsation of the heart, beating a given number of times in a minute; the pulse quickening during

excitement and more rapid motion, and being slower when in comparative rest, yet on the whole preserving a remarkable uniformity of action. Nor can any one in full health and vigor be more unconscious of the rapid contractions and dilatations of the heart, than are nearly all the inmates of the steam-ship of the complicated works and movements of the machinery, on the accuracy of which their progress and safety depends.

In the course of the last twelve months, the steamers on this line have sometimes taken as much as seventeen, and even twenty-one days, to make their passage against head winds by Halifax to Boston; but the comparative advantage of steam power is never more evident than at the period of the most tedious voyages, the liners having required seventy days or more to cross in corresponding seasons.

During the passage we had some animated discussions in the saloon on the grand experiment now making by the British government, of importing Coolies, or Hindoo emigrants, from the Deccan into the West Indies, to make up for the deficiency of Negro labor consequent on the emancipation of the slaves. We had on board a Liverpool merchant, who had a large contract for conveying these Coolies across the ocean, and who told us that more than forty ships would be employed this year (1845) in carrying each 300 Hindoo laborers to Jamaica, at the cost of £16 per head, and that he should sell the casks, which contained the water for their drink, for the sugar trade in the West Indies. The New Englanders on board wished to know how far this proceeding differed from a new slave trade. It was explained to them that the emigrants were starving in their own country; that the act was a voluntary one on their part; and that, after a short term of years, the government was bound to give them a free passage back to their native country. Of this privilege many, after saving a sum of money, had actually availed themselves. It was also alleged that they made good agricultural laborers in a tropical climate. The Americans replied, that to introduce into any colony two distinct races, having different languages and religions, such as Negroes and Hindoos, is a curse of the greatest magnitude, and of the most

lasting kind, as experience had proved throughout the American continent.

A Barbadoes planter, who was present, declared his opinion that in his island the emancipation of the negroes had been successful; the population, about 120,000, being dense, and a large proportion of them having white blood in their veins, with many of the wants of civilized men, and a strong wish to educate their children. The Americans, however, drew from him the admission, that in proportion as the colored people were rising in society, the whites, whose aristocratic feelings and tastes were wounded by the increased importance of the inferior race, were leaving Barbadoes, the richest of them retreating to England, and the poor seeking their fortunes in the United States. It was also conceded, that in the larger islands, such as Jamaica, which the Americans compared to their Southern States, the negroes have retreated to unoccupied lands and squatted, and could not be induced to labor, and were therefore retrograding in civilization; so that the experience of more than ten years would be required before the Americans could feel warranted in imitating the example of England, even if they had the means of indemnifying the southern planters.

We landed at Halifax on the 17th of September, and spent some hours there very agreeably, much refreshed by a walk on terra firma, and glad to call on some friends in the town. I was surprised to find that some of our fellow passengers, bound for Montreal, intended to go on with us to Boston, instead of stopping here; so great are the facilities now enjoyed of traveling from New England to Canada, passing viâ Boston by railway to Albany, and thence by steam-boats through Lakes George and Champlain to Montreal.

The chief subject of conversation, during the remaining two days of our voyage, was the death of Judge Story, the eminent jurist, whose works and decisions have been often cited as of high authority by English judges. The news of this unexpected event reached us at Halifax, and was evidently a matter of deep concern to his fellow citizens, by whom he had been much loved and admired. After retiring from the bench of the Supreme Court

at Washington, Story had been placed at the head of the Law School in Harvard University, which he had soon raised to celebrity from small beginnings, drawing students to his lectures from every state of the Union.

I afterward read, in the newspapers of Boston, several funeral orations pronounced in his honor, some from the pulpit, by preachers of his own denomination (he was president of the Unitarian Association), which praised him for his pure, scriptural, and liberal Christianity, and represented him as an earnest defender of the faith, one who had given to its evidences that accurate investigation which his reflecting mind and professional habits demanded. "What he found to be true, he was never ashamed or afraid to declare. He valued the Gospel and felt his own need of its restraining and consoling power, alike in temptation and grief," &c.

But eloquent eulogies were not wanting from ministers of some of the other churches, usually called in New England, by way of distinction from the Unitarian, "orthodox," some of which displayed at once the intensity and liberality of sectarian feeling in this country. They did homage to his talents and the uprightness of his conduct, and they dealt with his theological opinions in the spirit of Dryden's beautiful lines :—

> "The soul of Arcite went where heathens go,
> Who better live than we, though less they know."

I will extract, from one of the most favorable of these effusions, the following passage :—

"Judge Story was a Christian who professed a firm belief in the Bible as a revelation from God. He was a Unitarian; but if he reposed in the divine mercy through the mediation of Christ, and if he came with the temper of a child to the Scriptures, I have no doubt he has been received of Him to whom, in his last words, he committed himself in prayer; and, had he been more orthodox in his creed without the Christian spirit and the Christian life, his orthodoxy would not have saved him."

Sept. 19.—Early in the morning of the fifteenth day from our leaving Liverpool, we came in sight of the lighthouse of Cape

Anne, and a small and gayly painted green schooner, in full sail, and scudding rapidly through the water, brought us a pilot. In a few hours the long line of coast became more and more distinct, till Salem, Nahant, Lynn, the harbor of Boston and its islands, and at last the dome of the State House, crowning the highest eminence, came full into view. To us the most novel feature in the architectural aspect of the city, was the Bunker Hill Monument, which had been erected since 1842; the form of which, as it resembles an Egyptian obelisk, and possibly because I had seen that form imitated in some of our tall factory chimneys, gave me no pleasure.

After the cloudy and stormy weather we had encountered in the Atlantic, and the ice and fogs seen near the great banks, we were delighted with the clear atmosphere and bright sunshine of Boston, and heard with surprise of the intense heat of the summer, of which many persons had lately died, especially in New York. The extremes, indeed, of heat and cold in this country, are truly remarkable. Looking into the windows of a print shop, I saw an engraving of our good ship, the Britannia, which we had just quitted, represented as in the act of forcing her way through the ice of Boston harbor in the winter of 1844—a truly arctic scene. A fellow passenger, a merchant from New York, where they are jealous of the monopoly hitherto enjoyed by their New England rival, of a direct and regular steam communication with Europe, remarked to me that if the people of Boston had been wise, they would never have encouraged the publication of this print, as it was a clear proof that the British government should rather have selected New York, where the sea never freezes, as the fittest port for the mail packets. I had heard much during the voyage of this strange adventure of the Britannia in the ice. Last winter it appears there had been a frost of unusual intensity, such as had not been known for more than half a century, which caused the sea to be frozen over in the harbor of Boston, although the water is as salt there as in mid-ocean. Moreover, the tide runs there at the rate of four or five miles an hour, rising twelve feet, and causing the whole body of the ice to be uplifted and let down again to that amount twice every twen-

ty-four hours. Notwithstanding this movement, the surface remained even and unbroken, except along the shore, where it cracked.

Had the continuance of this frost been anticipated, it would have been easy to keep open a passage; but on the 1st of February, when the Britannia was appointed to sail, it was found that the ice was seven feet thick in the wharf, and two feet thick for a distance of seven miles out; so that wagons and carts were conveying cotton and other freights from the shore to the edge of the ice, where ships were taking in their cargoes. No sooner was it understood that the mail was imprisoned, than the public spirit of the whole city was roused, and a large sum of money instantly subscribed for cutting a canal, seven miles long and 100 feet wide, through the ice. They began the operation by making two straight furrows, seven inches deep, with an ice plough drawn by horses, and then sawed the ice into square sheets, each 100 feet in diameter. When these were detached, they were made to slide, by means of iron hooks and ropes fixed to them, under the great body of the ice, one edge being first depressed, and the ropes being pulled by a team of horses, and occasionally by a body of fifty men. On the 3d of February, only two days after her time, the steamer sailed out, breaking through a newly-formed sheet of ice, two inches thick, her bows being fortified with iron to protect her copper sheeting. She burst through the ice at the rate of seven miles an hour without much damage to her paddles; but before she was in clear water, all her guard of iron had been torn off. An eye-witness of the scene told me that tents had been pitched on the ice, then covered by a slight fall of snow, and a concourse of people followed and cheered for the first mile, some in sleighs, others in sailing boats fitted up with long blades of iron, like skates, by means of which they are urged rapidly along by their sails, not only before the wind, but even with a side wind, tacking and beating to windward as if they were in the water.

The Britannia, released from her bonds, reached Liverpool in fifteen days, so that no alarm had been occasioned by the delay; and when the British Post-Office department offered to defray

the expense of the ice-channel, the citizens of Boston declined to be reimbursed.

We were not detained more than an hour in the Custom-house, although the number of our packages was great. In that hour the newspapers which had come out with us had been so rapidly distributed, that our carriage was assailed in the streets by a host of vociferous boys, calling out, "Fifteen days later from Europe"—"The *Times* and *Punch* just received by the Britannia." In the course of my travels in the United States I heard American politicians complaining of the frequent change of officials, high and low, as often as a new party comes into power. In spite of this practice, however, the Custom-house officers, greatly to the comfort of the public, belong to a higher grade of society than those at Liverpool and our principal ports. I asked a New England friend, who was well acquainted with the "Old Country," whether the subordinates here are more highly paid? "By no means," he replied. "The difference, then," said I, "must be owing to the better education given to all in your public schools?" "Perhaps, in some degree," he rejoined; "but far more to the peculiarity of our institutions. Recent examples are not wanting of men who have passed in a few years from the chief place in one of our great Custom-houses to a seat in the Cabinet or an appointment as embassador to a first-rate European power; but, what is far more to the point, men who are unsuccessful at the bar or the church, often accept inferior stations in the Custom-house and other public offices without loss of social position." This explanation led me to reflect how much the British public might gain if a multitude of the smaller places in the public service at home, now slighted by aristocratic prejudices as ungenteel, were filled by those gentlemen who, after being highly educated at Eton and other public schools, lead now a pastoral life in Australia, or spend their best days in exile far from their kindred and native land, as soldiers or sailors, within the tropics.

CHAPTER II.

Boston.—Horticultural Show in Faneuil Hall.—Review of Militia.—Peace Association.—Excursion to the White Mountains.—Railway Traveling.—Portsmouth, New Hampshire.—Geology, Fossils in Drift.—Submarine Forest.—Wild Plants: Asters, Solidagos, Poison Ivy.—Swallows.—Glacial Grooves.—Rocks transported by Antarctic Ice.—Body of a Whale discovered by an American Trader in an Iceberg.

GREAT progress has been made in beautifying the city of Boston by new public buildings in the three years since we were last here. Several of these are constructed of granite, in a handsome style of architecture. The site of the town is almost an island, which has been united to the main land by long mounds, which are beginning to radiate in all directions, except the east, like the spokes of a wheel. Railway trains are seen continually flying to and fro along these narrow causeways at all hours of the day.

On the evening of our arrival we went to a horticultural show of fruit and flowers in Faneuil Hall, where we found a large assembly of both sexes enjoying a "temperance feast," a band of music in the gallery, and the table spread with cakes, fruit, ices, tea, milk, and whey. I was glad to observe, what I am told, however, is an innovation here, that the ladies, instead of merely looking on from a gallery to see the gentlemen eat, were sitting at table in the body of the hall, and listening to some of the first orators of the land, Daniel Webster, R. C. Winthrop, and our friend and late fellow-voyager in the Britannia, Edward Everett, whose reception, on his return from his embassy to England, was most enthusiastic. He said, "he had been so lately rocking on the Atlantic, whose lullaby was not always of the gentlest, that he was hardly fit for a rocking in 'the old cradle of Liberty;' and felt almost unconsciously inclined to catch at the table to steady himself, expecting to see the flowers and the fruit fetch away in some lee-lurch. Even the pillars of old Faneuil Hall,

which are not often found out of the true plumb-line, seemed to reel over his head."

Allusion was here made to this Hall having been the place of large popular meetings before 1775, where American patriotism was first roused to make a stand against the claims of the mother-country to impose taxes without consent of the provincial legislature. In later days, the building being under the control of the city authorities, and the Whigs being usually in the ascendant here, the moderate party have almost always obtained possession of the Hall.

Sept. 23.—From the windows of a friend's house, opening on the Common, we have a full view of what is called the "Fall Parade," or autumnal review of the Boston militia, cavalry and infantry, which has lasted all day, ending with a sham fight and much firing of cannon. Not that there is any excess of military fervor in this State, as in some others at the present moment; on the contrary, a numerous and increasing Peace Association is distributing, gratis, many thousand copies of a recent Fourth-of-July oration against war and military establishments, delivered by Mr. Charles Sumner. I was asked by a young friend here, in full uniform, whether I did not think "Independence-day" (an anniversary when all who have a regimental costume are accustomed to wear it), a most inappropriate time for such an effusion, in which non-resistance principles bordering on Quakerism had been avowed; the orator asking, among other questions, "What is the use of the militia of the United States?" and going as far as Channing in pronouncing war to be unchristian.

I remembered having once admired the present Bishop of St. Asaph for choosing a certain day, set apart by the English Church for commemorating the "conspiracy, malicious practices, and Popish tyranny of the Romanists," for preaching a sermon on religious toleration; and I therefore felt some hesitation in condemning the opportunity seized upon by an enthusiast of the peace party for propagating his views.

> "There is a soul of goodness in things evil
> Would men observingly distill it out."

So long as the War of Independence lasted, I can understand

the policy of annually reading out to the assembled multitude the celebrated "Declaration," setting forth the injuries inflicted by Great Britain, her usurpations previous to the year 1776, "her design to reduce the Americans to a state of absolute dependence by quartering armed troops upon the people—refusing to make the judges independent of the crown—imposing taxes without consent of the colonies—depriving them of trial by jury—sometimes suspending their legislatures—waging war against the colonies, and transporting to their shores large armies of foreign mercenaries to complete the work of death, desolation, and tyranny already begun, with circumstances of cruelty and perfidy scarcely paralleled in the most barbarous ages—exciting domestic insurrections—bringing on the inhabitants of the frontiers the merciless Indian savages, whose known rule of warfare is the destruction of all ages, sexes, and conditions," &c., &c.

All this recital may have been expedient when the great struggle for liberty and national existence was still pending; but what effect can it have now, but to keep alive bad feelings, and perpetuate the memory of what should nearly be forgotten? In many of the newer States the majority of the entire population have either themselves come out from the British Isles as new settlers, or are the children or grandchildren of men who emigrated since the "Declaration" was drawn up. If, therefore, they pour out in schools, or at Fourth-of-July meetings, declamatory and warlike speeches against the English oppressors of America, their words are uttered by paricidal lips, for they are the hereditary representatives, not of the aggrieved party, but of the aggressors.

To many the Peace Associations appear to aim at objects as Utopian and hopeless as did the Temperance Societies to the generation which is now passing away. The cessation of war seems as unattainable as did the total abstinence from intoxicating liquors. But we have seen a great moral reform brought about, in many populous districts, mainly by combined efforts of well-organized societies to discourage intemperance, and we may hope that the hostilities of civilized nations may be mitigated at least by similar exertions. "In the harbor of Boston," says Mr.

Sumner, "the Ohio, a ship of the line, of ninety guns, is now swinging idly at her moorings. She costs as much annually to maintain her in service, in salaries, wages, and provisions, as four Harvard Universities." He might have gone on to calculate how many primary schools might be maintained by the disbanding of single regiments, or the paying off of single ships, of those vast standing armies and navies now kept up in so many countries in Europe. How much ignorance, bigotry, and savage barbarism in the lower classes might be prevented by employing in education a small part of the revenues required to maintain this state of armed peace!

Sept. 22.—At this season the wealthier inhabitants of Boston are absent at watering-places in the hills, where there are mineral springs, or at the sea-side. Some of them in their country villas, where we visited several friends in the neighborhood. The environs of Boston are very agreeable; woods and hills, and bare rocks, and small lakes, and estuaries running far into the land, and lanes with hedges, and abundance of wild flowers. The extreme heat of summer does not allow of the green meadows and verdant lawns of England, but there are some well-kept gardens here—a costly luxury where the wages of labor are so high.

Sept. 24.—I had determined before the autumn was over to make an excursion to the White Mountains of New Hampshire, which, with the exception of those in part of the Alleghany range in North Carolina, are the loftiest east of the Mississippi. Accordingly, I set off with my wife on the railway for Portsmouth, fifty-four miles north of Boston, which we reached in two hours and three quarters, having stopped at several intervening places, and going usually at the rate of twenty miles an hour. There were about eighty passengers in the train, forty of whom were in the same carriage as ourselves. "The car," in shape like a long omnibus, has a passage down the middle, sometimes called "the aisle," on the back part of which the seats are ranged transversely to the length of the apartment, which is high enough to allow a tall man to walk in it with his hat on. Each seat holds two persons, and is well-cushioned and furnished with a

wooden back ingeniously contrived, so as to turn and permit the traveler to face either way, as he may choose to converse with any acquaintance who may be sitting before or behind him. The long row of windows on each side affords a good view of the country, of which more is thus seen than on our English railroads. The trains, moreover, pass frequently through the streets of villages and towns, many of which have sprung up since the construction of the railway. The conductor passes freely through the passage in the center, and from one car to another, examining tickets and receiving payment, so as to prevent any delay at the stations.

If we desire to form an estimate of the relative accommodation, advantages, comforts, and cost of the journey in one of these railways as compared with those of England, we must begin by supposing all our first, second, and third-class passengers thrown into one set of carriages, and we shall then be astonished at the ease and style with which the millions travel in the United States. The charge for the distance of fifty-four miles, from Boston to Portsmouth, was $1\frac{1}{2}$ dollar each, or 6*s.* 4*d.* English, which was just half what we had paid three weeks before for first-class places on our journey from London to Liverpool (2*l.* 10*s.* for 210 miles), the speed being in both cases the same. Here there is the want of privacy enjoyed in an English first-class carriage, and the seats, though excellent, are less luxurious. On the other hand, the power of standing upright when tired of the sitting posture is not to be despised, especially on a long journey, and the open view right and left from a whole line of windows is no small gain. But when we come to the British second and third-class vehicles, cushionless, dark, and if it happen to rain, sometimes closed up with wooden shutters, and contrast them with the cars of Massachusetts, and still more the average appearance, dress, and manners of the inmates, the wide difference is indeed remarkable; at the same time, the price which the humblest class here can afford to pay proves how much higher must be the standard of wages than with us.

On starting, we had first to cross the harbor of Boston in a large ferry-boat, where, to economize time, there is a bar with

refreshments, so that you may breakfast; or, if you please, buy newspapers, or pamphlets, or novels. We then flew over rails, supported on long lines of wooden piles, following the coast, and having often the sea on one side, and fresh-water lakes, several miles long, or salt marshes, on the other. In some of the marshes we saw large haycocks on piles, waiting till the winter, when, the mud and water being firmly frozen, the crop can be carried in. We were soon at Lynn, a village of shoemakers, exporting shoes to distant parts of the Union; and next went through the center of the town of Salem, partly in a tunnel in the main street; then proceeded to Ipswich, leaving on our left Wenham Lake, and seeing from the road the wooden houses in which great stores of ice are preserved. In some of the low grounds I saw peat cut, and laid out to dry for fuel. We crossed the river Merrimack near its mouth, on a bridge of great length, supported by piles, and then entered New Hampshire, soon coming to the first town of that state, called Portsmouth, which has a population of 8000 souls, and was once the residence of the colonial governor. Here I made a short stay, passing the evening at the house of Mr. J. L. Hayes, to whom we had letters of introduction, where we found a gay party assembled, and dancing.

Next morning I set out on an excursion with Mr. Hayes, to explore the geological features of the neighborhood, which agree with those of the eastern coast generally throughout Massachusetts, and a great part of Maine—a low region of granitic rocks, overspread with heaps of sand and gravel, or with clay, and here and there an erratic or huge block of stone, transported from a distance, and always from the north. Lakes and ponds numerous, as in the country of similar geological composition in the south of Norway and Sweden. Here, also, as in Scandinavia, the overlying patches of clay and gravel often contain marine fossil shells of species still living in the Arctic Seas, and belonging to the genera *Saxicava*, *Astarte*, *Cardium*, *Nucula*, and others, the same which occur in what we call the northern drift of Ireland and Scotland. Some of the concretions of fine clay, more or less calcareous, met with in New Hampshire, in this

"drift" on the Saco river, thirty miles to the north of Portsmouth, contain the entire skeletons of a fossil fish of the same species as one now living in the Northern Seas, called the capelan (*Mallotus villosus*), about the size of a sprat, and sold abundantly in the London markets, salted and dried like herrings. I obtained some of these fossils, which, like the associated shells, show that a colder climate than that now prevailing in this region was established in what is termed "the glacial period." Mr. Hayes took me to Kittery, and other localities, where these marine organic remains abound in the superficial deposits. Some of the shells are met with in the town of Portsmouth itself, in digging the foundation of houses on the south bank of the river Piscataqua. This was the most southern spot (lat. 43° 6′ N.) to which I yet had traced the fossil fauna of the boulder period, retaining here, as in Canada, its peculiar northern characters, consisting of a profusion of individuals, but a small number of species; and a great many of those now abounding in the neighboring sea being entirely absent. It is only farther to the south, and near the extreme southern limit of the drift, or boulder clay, as at Brooklyn, in Long Island, for example, that a mixture of more southern species of shells begin to appear, just as Professor E. Forbes has detected, in the drift of the south of Ireland, the meeting of a Mediterranean and Arctic fauna.

Every where around Portsmouth I observed that superficial polish in the rocks, and those long, straight grooves or furrows, which I before alluded to (p. 18), as having been imprinted by icebergs on the ancient floor of the ocean. By the inland position of these fossil shells of *recent species*, the geologist can prove that, at times comparatively modern in the earth's history, the larger part of New England and Canada lay for ages beneath the waters of the sea, Lake Champlain and the valley of the St. Lawrence being then gulfs, and the White Mountains an island.* But it is a curious fact that we also discover along this same eastern coast signs no less unequivocal of partial subsidence of land at a period still more recent. The evidence consists of swamps, now submerged at low water, containing the roots and

* See my "Travels in N. America, 1841–2," vol. ii. p. 142.

upright stools of the white cedar (*Cupressus thyoides*), showing that an ancient forest must once have extended farther seaward. One of these swamps we passed yesterday at Hampton, on the way from Boston to Portsmouth; and Mr. Hayes gave me specimens of the submarine wood in as fresh a state as any occurring a few yards deep in a British peat-bog.

That some of these repositories of buried trees, though geologically of the most modern date, may really be of high antiquity, considered with reference to the history of man, I have no doubt; and geologists may, by repeated observations, ascertain the minimum of time required for their formation previously to their submergence. Some extensive cedar-swamps, for example, of the same class occur on the coast near Cape May, in the southern extremity of the State of New Jersey, on the east side of Delaware Bay, filled with trees to an unknown depth; and it is a constant business to probe the soft mud of the swamp with poles for the purpose of discovering the timber. When a log is found, the mud is cleared off, and the log sawed up into proper lengths for shingles or boards. The stumps of trees, from four to five feet, and occasionally six feet in diameter, are found standing with their roots in the place in which they grew, and the trunks of aged cedars are met with in every possible position, some of them lying horizontally under the roots of the upright stumps. Dr. Bresley, of Dennis Creek, counted 1080 rings of annual growth between the center and outside of a large stump six feet in diameter, and under it lay a prostrate tree, which had fallen and been buried before the tree to which the stump belonged first sprouted. This lower trunk was five hundred years old, so that upward of fifteen centuries were thus determined, beyond the shadow of a doubt, as the age of one small portion of a bog, the depth of which is as yet unknown.

Mr. Hayes drove me in his carriage through woods of fir on both banks of the Piscataqua, where the ground was covered with that fragrant shrub, the candleberry (*Myrica cerifera*), the wax of which, derived from its shining black berries, is used for making candles. The odor of its leaves resembles that of our bog-myrtle (*Myrica gale*). The barberry, also (*Berberis vul-*

garis), although not an indigenous plant, is very abundant and ornamental in the woods here. It has overrun, in modern times the eastern shores of New England, and made its way many miles inland, to the great annoyance of the agriculturists. Some naturalists wonder how it can spread so fast, as the American birds refuse, like the European ones, to feed on its red berries; but if it be true that cattle, sheep, and goats occasionally browse on this shrub, there is no mystery about the mode of its migration, for the seeds may be sown in their dung. The aromatic shrub called sweet fern (*Comptonia asplenifolia*), forms nearly as large a proportion of the undergrowth here as does the real fern (*Pteris*) in some of our English forests. I have seen this part of North America laid down in some botanical maps as the region of asters and solidagos; and certainly the variety and abundance of golden-rods and asters is at this season very striking, although a white everlasting (*Gnafalium*) is almost equally conspicuous. Among other shrubs, I saw the poison-ivy (*Rhus radicans*), a species of sumach, growing on rocks and walls. It has no effect on some people, but the slightest touch causes an eruption on the skin of others. A New England botanist once told me that, by way of experiment, he rubbed his arm with the leaves, and they gave rise to a painful swelling, which was long in subsiding.

In Mr. Hayes's garden at Portsmouth were some of the smaller white-bodied swallows or martins (*Hirundo viridis*), protected from their enemy, the larger martin (*Hirundo purpurea*), by having small holes made for them in flower-pots, which the others could not pass through. The larger kind, or house-martin, is encouraged every where, small wooden boxes being made for them on roofs or on the tops of poles, resembling pigeon-houses, which may often be seen on the top of a sign-post before a New England inn. They are useful in chasing away birds of prey from the poultry-yard; and I once saw a few of them attacking a large hawk. But I suspect they are chiefly favored for mere amusement sake, and welcomed, like our swallows, as the messengers of spring, on their annual return from the south. It is pleasing to hear them chattering with each other, and to mark their elegant forms and bluish-black plumage, or to watch them

on the wing, floating gently in the air, or darting rapidly after insects. Thousands of these birds, with their young, died in their nests in the spring of 1836, during a storm of cold rain, which lasted two weeks, and destroyed the insects throughout the states of New York and New England. The smaller species (*Hirundo viridis*) then regained possession of their old haunts, occupying the deserted houses of the more powerful species, which, like the house-sparrow in Europe, has followed the residence of man.

The sun was very powerful at noon; but the severity of the cold here in winter is so great, that a singular effect is produced in the Piscataqua when the thermometer sinks to 15° below zero. The tide pours into the estuary a large body of salt water partaking of the warmer temperature of the gulf stream, and this water, coming into the colder atmosphere, smokes like a thermal spring, giving rise to dense fogs.

I had been desirous of making the acquaintance of Mr. Hayes, in consequence of having read, before I left England, an excellent paper published by him in the Boston Journal of Natural History, for 1844, on the Antarctic Icebergs, considered as explanatory of the transportation of rocky masses, and of those polished rocks and glacial grooves and striæ before alluded to. He had derived his information from experienced men engaged in the southern whale fisheries, principally merchants of New Bedford, Massachusetts, and Stonington, Rhode Island. On looking over his original MS. notes, I found he had omitted to print some particulars of the evidence, which I consider of no small interest as throwing light on a class of geological appearances hitherto thought least reconcilable with the ordinary course of nature. As to the carriage of huge fragments of rock for many hundreds of miles, from one region to another, such transportation was formerly appealed to by writers now living as among the marvels of the olden time, resembling the feats of the fabulous ages, and as much transcending the powers of nature in these degenerate days, as the stone hurled by Hector against the Grecian gate, exceeded in weight and size what could now be raised from the ground by two of the strongest of living men (οἷοι νῦν βροτοί).

But after reading the accounts given by Sir James Ross and Captain Wilkes, of the transfer of erratics by ice, from one point to another of the southern seas, these traveled boulders begin to be regarded quite as vulgar phenomena, or matters of every-day occurrence.

There still remain, however, among the wonders of the polar regions, some geological monuments which appear sufficiently anomalous when we seek to explain them by modern analogies. I refer to the preservation in ice of the carcasses of extinct species of quadrupeds in Siberia; not only the rhinoceros originally discovered, with part of its flesh, by Pallas, and the mammoth afterward met with on the Lena by Adams, but still more recently the elephant dug up by Middendorf, September, 1846, which retained even the bulb of the eye in a perfect state, and which is now to be seen in the museum at Moscow.*

In part of the unpublished evidence collected by Mr. Hayes, are statements which may perhaps aid us in elucidating this obscure subject; at all events they are not undeserving of notice, were it only to prove that nature is still at work in the icy regions enveloping a store of organic bodies in ice, which, after a series of geographical and climatal changes, and the extermination of some of the existing cetacea, might strike the investigator at some remote period of the future as being fully as marvelous as any monuments of the past hitherto discovered. The first extract, which I make, with Mr. Hayes' permission, is from the evidence of Captain Benjamin Pendleton, of Stonington, who, from his knowledge of the South Shetland fisheries, was chosen by the American government to accompany the late exploring expedition to the Antarctic seas. He had cruised in 1820 and 1822 for 600 miles along the lofty ice cliffs bounding the great southern continent. He says, that in 1821, when he wished to bury a seaman in one of the South Shetland islands, several parties of twelve men each, were set to dig a grave in the blue sand and gravel; but after penetrating in nearly a hundred places through six or eight inches of sand, they came down every where upon solid blue ice. At last he determined to have a hole cut in the ice, of which the island principally consisted, and the body of the man

* See "Principles of Geology," by the Author, 7th ed. 1847, p. 83.

was placed in it. In 1822, Captain Barnham dug out the body from the ice, and found the clothes and flesh perfectly fresh as when they were buried.

So far this narrative may be said merely to confirm and to bear out another published by Captain Kendall, of our navy, in the London Geographical Journal, 1830 (pp. 65, 66), where he relates that the soil of Deception Island, one of the South Shetlands, consists of ice and volcanic ashes interstratified, and he discovered there the body of a foreign sailor, which had long been buried, with the flesh and all the features perfectly preserved. Mr. Darwin, commenting on that fact, has observed, that as the icy soil of Deception Island is situated between lat. 62° and 63° S., it is nearer the equator by about 100 miles than the locality where Pallas first found the frozen rhinoceros of Siberia, in lat. 64° N.*

But Captain Pendleton goes on to relate, that while he was in Deception Island an iceberg was detached from a cliff of ice 800 feet high. The piece which fell off was from 60 to 100 feet deep, and from 1500 to 3000 feet in length. At an elevation of about 280 feet above the level of the sea, part of a whale was seen remaining inclosed in the ice-cliff, the head and anterior parts having broken off about the flippers and fallen down with the detached mass of ice. The species was what the whalers call the "Sulphur-bottom," resembling the fin-back. Captain Pendleton contrived to get out the portion which had fallen, and obtained from it eight or ten barrels of oil. The birds for a long time fed upon the entrails. This fact was known to Captain Beck and others. Captain William Pendleton, another whaler of experience, also informs Mr. Hayes, that skeletons of whales had been met with in the South Shetlands, when he visited them, 300 feet above the level of the sea. Thomas Ash also saw, on "Ragged Island" beach, the skeleton and some of the soft parts of a whale many feet above the reach of the highest tides. Captain William Beck, master of a whaling ship, has seen whales' bones and carcasses sixty or seventy feet above the sea-level, and a mile and a half from the water.

* Darwin's Journal, 2d ed. p. 249.

To explain how the bodies and skeletons of these inhabitants of the deep, whether found entombed or not in ice, were carried up to considerable heights above the level of the sea, appeared to me at first more difficult than to account for their having been included in solid ice. A few months after my visit to Portsmouth I saw Captain Wilkes, of the United States Exploring Expedition, and called his attention to the problem. He remarked, that the open sea sometimes freezes round the Sandwich Islands, so that ships can not approach within 100 miles of the shore. In like manner, in Antarctic regions, the ocean often freezes over the base of a cliff formed of barrier ice. In all these cases, the sheet of ice, however continuous, does not adhere to the land or the barrier, because the rise and fall of the tide, however slight, causes a rent, permitting the whole mass to move up and down. The snow, drifting off the land in vast quantities during winter, falls over the cliffs upon the frozen surface of the sea, until its weight is such that it causes the whole mass to sink; and unless the winds and currents happen to float it off, it may go on subsiding till it acquires a great thickness, and may at last touch the bottom. Before this happens, however, it usually gets adrift, and, before it has done melting, tumbles over or capsizes more than once.

On my return to England, in 1846, I described the same phenomena to my friend Dr. Joseph Hooker, and subsequently to Sir James Ross, and they both of them, without hearing Captain Wilkes's theory, suggested the same explanation, having observed that a great sheet of ice had formed in the sea by the freezing of melted snow on the southern or polar side of every Antarctic island. If the carcass of a dead whale be thrown up on this ice, it must soon be buried under other snow drifted from the land, and will at length be inclosed in the lower part of an iceberg, formed in the manner before described. The frequent overturning or reversal of position of these great masses, arises from the temperature of the water at the depth of 1000 or 1500 feet, to which they frequently descend, being much warmer than the incumbent air or more superficial water. When the inferior or submerged portions melt, the center of gravity is soon changed;

and a magnificent example is recorded by Sir James Ross of the capsizing of a great island of ice near Possession Island, in lat. 71° 56′ S. What had previously been the bottom came up and rose 100 feet above the surface of the sea, and the whole of the new top and eastern side were seen to be covered with earth and stones. A party landed on it, and a slight rocking motion was still perceptible, such as no waves or swell of the sea, even in a storm, are ever capable of imparting to such large icebergs.* The lower down the carcass of the whale is buried in the original berg, the higher up will it be raised above the level of the sea when the same berg has turned over.

* Sir J. Ross's Voyage to Southern Seas, vol. i. pp. 195, 196.

CHAPTER III.

Portland in Maine.—Kennebec River.—Timber Trade.—Fossil Shells at Gardiner.—Augusta, the Capital of Maine.—Legal Profession: Advocates and Attorneys.—Equality of Sects.—Religious Toleration.—Calvinistic Theology.—Day of Doom.

Sept. 25, 1845.—HERE we are at mid-day flying along at the rate of twenty-five and occasionally thirty miles an hour, on our way to Portland, the chief city of Maine. It was only yesterday afternoon that we left Boston, and in less than three hours we performed what would have been formerly reckoned a good day's journey of forty-five miles, had seen at Portsmouth some collections of natural history, and afterward gone to a ball. In the forenoon of this day I have made geological excursions on both banks of the Piscataqua, and before dark shall have sailed far up the Kennebec. It is an agreeable novelty to a naturalist to combine the speed of a railway and the luxury of good inns with the sight of the native forest—the advantages of civilization with the beauty of unreclaimed nature—no hedges, few plowed fields, the wild plants, trees, birds, and animals undisturbed.

Cheap as are the fares, these railroads, I am told, yield high profits, because the land through which they run costs nothing. When we had traversed a distance of about sixty miles, the cars glided along some rails over the wharf at Portland, and we almost stepped from our seats on to the deck of the Huntress steamer, which was ready to convey us to the mouth of the Kennebec river.

After threading a cluster of rocky islands adorned with fir and birch in the beautiful Bay of Casco, we came to the Sound, and for a short space were in the open sea, with no view but that of a distant coast. As there was nothing to see, we were glad to be invited to dinner, and were conducted to the gentlemen's cabin, a sort of sunk story, to which the ladies, or the women of every degree, were, according to the usual etiquette, taken down first, and carefully seated at the table by the captain, before the

gentlemen were admitted. Above this apartment where we dined was the ladies' cabin, and above that the upper deck, where we sat to enjoy the prospect as we approached the mouth of the Kennebec. In the forepart of the vessel, on this upper deck, is a small room, having windows on all sides, where the man at the helm is stationed; not at the stern, as in our boats, which is considered by the Americans as a great improvement on the old system, as the steersman's view can not be intercepted, and the passengers are never requested to step on one side to enable him to see his way. Directions to the engineer, instead of being transmitted by voice through an intermediate messenger, are given directly by one or more loud strokes on a bell. The fuel used is anthracite, the absence of oxygen being compensated by a strong current of air kept up by what resembles a winnowing-machine, and does the work of a pair of bellows.

After sailing up the Kennebec about fifteen miles we came to Bath, a town of 5000 souls, chiefly engaged in ship-building, a branch of industry in which the State of Maine ranks first in the Union; the materials consisting of white oak and pine, the growth of native forests. Large logs of timber squared, and each marked with the owner's name, are often cast into the river, sometimes far above Augusta, and come floating down 100 miles to this place. In winter many of them get frozen into the ice and imprisoned for six or seven months, until the late spring releases them, and then not a few of them are carried far out into the Atlantic, where they have been picked up, with the owner's name still telling the place of their origin. The water is salt as far as Bath, above which it is fresh and freezes over, so as to allow sleighs and skaters to cross it in winter, although the influence of the tide extends as far up as Augusta, about forty miles above Bath. I am informed that the whole body of the ice rises and falls, cracking along the edges where it is weakest. Over the fissures planks are placed to serve as a bridge, or snow is thrown in, which freezes, and affords a passage to the central ice. The Kennebec, besides being enlivened by the "lumber trade," is at this season whitened with the sails of vessels laden with hay, which has been compressed into small bulk by the

power of steam. Many of these merchantmen are destined for New York, where the unusual heat and drought of the summer has caused a scanty crop of grass, but hundreds are bound to the distant ports of Mobile and New Orleans; so that the horses of Alabama and Louisiana are made to graze on the sweet pastures of Maine, instead of the coarser and ranker herbage of the southern prairies. In a few months these northern-built ships will bring back bales of cotton for factories newly established by Boston capitalists, and worked on this river both by water power and steam. Such are the happy consequences of the annexation of Louisiana to the United States. But for that event, the favorite theories of political economy in New England, and the duty of protecting native industry, would have interposed many a custom-house and high tariff between Maine and the valley of the Mississippi.

As we passed Bath a large eagle, with black wings and a white body, was seen soaring over our heads; and, a few miles above, where the salt and fresh water meet, seals were seen sporting close to the steamer. The Kennebec is said to abound in salmon. We admired the great variety of trees on its banks; two kinds of birch with larger leaves than our British species, several oaks and pines, the hemlock with foliage like a yew-tree, and the silver-fir, and two species of maple, the sugar or rock maple (*Acer saccharinum*), and the white (*A. dasycarpum*), both of which yield sugar. To these two trees the beauty and brilliancy of the autumnal tints of the American forests are due, the rock maple turning red, purple and scarlet, and the white, first yellow, and then red.

We were conveyed in the Huntress to Gardiner, the head of steam-boat navigation here, sixty-eight miles distant from Portland, where we visited the country house of Mr. Gardiner, whose family gave its name to the settlement. It is built in the style of an English country seat, and surrounded by a park. At Mr. Allen's I examined, with much interest, a collection of fossil shells and crustacea, made by Mrs. Allen from the drift or "glacial" deposits of the same age as those of Portsmouth, already described. Among other remains I recognized the tooth of a

walrus, similar to one procured by me in Martha's Vineyard,* and other teeth, since determined for me by Professor Owen as belonging to the buffalo or American bison. These are, I believe, the first examples of land quadrupeds discovered in beds of this age in the United States. The accompanying shells consisted of the common mussel (*Mytilus edulis*), *Saxciava rugosa*, *Mya arenaria*, *Pecten Islandicus*, and species of the genera *Astarte*, *Nucula*, &c. The horizontal beds of clay and sand which contain these remains of northern species, and which imply that the whole region was beneath the sea at no distant period, impart to the scenery of the country bordering the Kennebec its leading features. The deposit of clay and sand is 170 feet thick in some places, and numerous valleys 70 feet deep are hollowed out of it by every small stream. At Augusta I saw this modern tertiary formation, 100 feet thick, resting on a ledge of mica schist, the shells being easily obtained from an undermined cliff of clay. In some places, as at Gardiner, conical hillocks, chiefly of gravel, about fifty feet high, and compared here, on account of the regularity of their form, to Indian mounds, stand isolated near the river. I conceive them to owe their shape to what the geologists term "denudation," or the action of waves and currents, which, as the country was rising gradually out of the sea, removed the surrounding softer clay and left these masses undestroyed. They would offer resistance to the force of moving water by the great weight and size of their component materials; for in them we find not only pebbles, but many large boulders of granite and other rocks.

Mr. Allen drove us in his carriage to Augusta, six miles from Gardiner, and 200 miles N.E. of Boston, where we visited the State House, handsomely built in the Grecian style, with a portico and large columns, the stone used being the white granite of this country. The rooms for the two houses of the legislature are very convenient. I was shown the library by the governor, who called my attention to some books and maps on geology, and talked of a plan for resuming the geological survey of the State, not yet completed.

* See "Travels," vol. i. p. 256.

Sept. 27.—Returned by the Huntress steamer to Portland, after sailing at the rate of fourteen miles an hour. On board were some lawyers, to one of whom, a judge in the State of Maine, Mr. Gardiner had introduced me. The profession of the law is, of all others in the United States, that which attracts to it the greatest number of able and highly educated men, not only for its own sake, but because it is a great school for the training up of politicians. The competition of so many practitioners cheapens fees, and, although this is said to promote litigation, it has at least the great advantage of placing the poor man on a more equal footing with the rich, as none but the latter can attempt to assert their rights in countries where the cost of a successful law-suit may be ruinous. Practically, there is much the same subdivision of labor in the legal profession here as in England; for a man of eminence enters into partnership with some one or more of the younger or less talented lawyers, who play the part assigned with us to junior counsel and attorneys. There are, however, no two grades here corresponding to barrister and attorney, from the inferior of which alone practitioners can pass in the regular course of promotion to the higher. Every lawyer in the United States may plead in court, and address a jury; and, if he is successful, may be raised to the bench: but he must qualify as counselor, in order to be entitled to plead in the Supreme Courts, where cases are heard involving points at issue between the tribunals of independent states. The line drawn between barrister and attorney in Great Britain, which never existed even in colonial times in Massachusetts, could only be tolerated in a country where the aristocratic element is exceedingly predominant. In the English Church, where seats in the House of Lords are held by the bishops, we see how the rank of a whole profession may be elevated by making high distinctions conferred only on a few, open to all. That, in like manner, the highest honors of the bar and bench might be open without detriment to the most numerous class of legal practitioners in Great Britain, seems to be proved by the fact, that occasionally some attorneys of talent, by quitting their original line of practice and starting anew, can attain, like the present Chief

Justice of the Common Pleas, to places of the first dignity. In Canada, under British rule, it is the custom to grant licenses to the same individual to practice indifferently in all the courts as advocate, solicitor, attorney, and proctor. When we consider the confidential nature of the business transacted by English attorneys, the extent of property committed to their charge, the manner in which they are consulted in family affairs of the utmost delicacy, as in the framing of marriage contracts and wills, and observe, moreover, how the management of elections falls into their hands, we may well question the policy of creating an artificial line of demarkation between them and the advocates, marked enough to depress their social rank, and to deter many young men of good families, who can best afford to obtain a liberal education, from entering the most profitable, and, in reality, the most important branch of the profession.

I have mentioned the Supreme Courts; in these, in each state, cases are heard involving points at issue between two independent jurisdictions; and in order to preserve uniformity in the interpretation of many different codes, as in the statutes passed from time to time by state legislatures, the previous decisions of courts of law are referred to, and the authority of judges of high repute in any part of the Union, and even in Great Britain, frequently cited. As points of international law are perpetually arising between so many jurisdictions, the Supreme Courts afford a fine field for the exercise of legal talent, and for forming jurists of enlarged views.

Portland, with 15,000 inhabitants, is the principal city of Maine; gay and cheerful, with neat white houses, shaded by avenues of trees on each side of the wide streets, the bright sunny air unsullied, as usual in New England, by coal smoke. There are churches here of every religious denomination: Congregationalists, Baptists, Methodists, Free-will Baptists, Universalists, Unitarians, Episcopalians, Roman Catholics, and Quakers, all living harmoniously together. The late governor of the state was a Unitarian; and, as if to prove the perfect toleration of churches the most opposed to each other, they have recently had a Roman Catholic governor.

On Sunday we accompanied the family of a lawyer, to whom we had brought letters, to a Unitarian church. There was nothing doctrinal in the sermon, and, among other indications of the altered and softened feelings of the sects which have sprung from the old Puritan stock, I remarked a gilt cross placed over the altar. The officiating minister told me that this step had been taken with the consent of the congregation, though not without the opposition of some of his elders. The early Puritans regarded this symbol as they did pictures and images, as the badges of superstition, the relics of the idolatrous religion so lately renounced by them; and it is curious to read, in the annals of the first colonists at Salem, how, in 1634, the followers of Roger Williams, the Brownist, went so far as to cut that "popish emblem," the red cross, out of the royal standard, as one which the train bands ought no longer to follow.*

During my first visit to the New England States, I was greatly at a loss to comprehend by what means so large a population had been brought to unite great earnestness of religious feeling with so much real toleration. In seeking for the cause, we must go farther back than the common schools, or at least the present improved state of popular education; for we are still met with the question, How could such schools be maintained by the state, or by compulsory assessments, on so liberal a footing, in spite of the fanaticism and sectarian prejudices of the vulgar? When we call to mind the religious enthusiasm of the early Puritans, and how at first they merely exchanged a servile obedience to tradition, and the authority of the Church, for an equally blind scripturalism, or implicit faith in the letter of every part of the Bible, acting as if they believed that God, by some miraculous process, had dictated all the Hebrew words of the Old, and all the Greek of the New Testament; nay, the illiterate among them cherishing the same superstitious veneration for every syllable of the English translation—how these religionists, who did not hesitate to condemn several citizens to be publicly whipped for denying that the Jewish code was obligatory on Christians as a rule of life, and who were fully persuaded that they alone were the

* Graham's History of United States, vol. i. p. 227.

chosen people of God, should bequeath to their immediate posterity such a philosophical spirit as must precede the organization by the whole people of a system of secular education acceptable to all, and accompanied by the social and political equality of religious sects such as no other civilized community has yet achieved—this certainly is a problem well worthy of the study of every reflecting mind. To attribute this national characteristic to the voluntary system, would be an anachronism, as that is of comparatively modern date in New England; besides that the dependence of the ministers on their flocks, by transferring ecclesiastical power to the multitude, only gives to their bigotry, if they be ignorant, a more dangerous sway. So, also, of universal suffrage; by investing the million with political power, it renders the average amount of their enlightenment the measure of the liberty enjoyed by those who entertain religious opinions disapproved of by the majority. Of the natural effects of such power, and the homage paid to it by the higher classes, even where the political institutions are only partially democratic, we have abundant exemplification in Europe, where the educated of the laity and clergy, in spite of their comparative independence of the popular will, defer outwardly to many theological notions of the vulgar with which they have often no real sympathy.

To account for the toleration prevailing in New England and the states chiefly peopled from thence, we must refer to a combination of many favorable circumstances, some of them of ancient date, and derived from the times of the first Puritan settlers. To these I shall have many opportunities of alluding in the sequel; but I shall mention now a more modern cause, the effect of which was brought vividly before my mind, in conversations with several lawyers of Maine, New Hampshire, and Massachusetts, whom I fell in with on this tour. I mean the reaction against the extreme Calvinism of the church first established in this part of America, a movement which has had a powerful tendency to subdue and mitigate sectarian bitterness. In order to give me some idea of the length to which the old Calvinistic doctrines were instilled into the infant mind, one of my companions presented me with a curious poem, called the "Day of Doom,"

formerly used as a school book in New England, and which elderly persons known to him had been required, some seventy years ago, to get by rote as children. This task must have occupied no small portion of their time, as this string of doggrel rhymes makes up no less than 224 stanzas of eight lines each. They were written by Michael Wigglesworth, A.M., teacher of the church of Malden, New England, and profess to give a poetical description of the Last Judgment. A great array of Scripture texts, from the Old and New Testament, is cited throughout in the margin as warranty for the orthodoxy of every dogma.

Were such a composition now submitted to any committee of school managers or teachers in New England, they would not only reject it, but the most orthodox among them would shrewdly suspect it to be a "weak invention of the enemy," designed to caricature, or give undue prominence to, precisely those tenets of the dominant Calvinism which the moderate party object to, as outraging human reason and as derogatory to the moral attributes of the Supreme Being. Such, however, were not the feelings of the celebrated Cotton Mather, in the year 1705, when he preached a funeral sermon on the author, which I find prefixed to my copy of the sixth edition, printed in 1715. On this occasion he not only eulogizes Wigglesworth, but affirms that the poem itself contains "plain truths drest up in a plain meter;" and further prophesies, that "as the 'Day of Doom' had been often reprinted in both Englands, it will last till the Day itself shall arrive." Some extracts from this document will aid the reader to estimate the wonderful revolution in popular opinion brought about in one or two generations, by which the harsher and sterner features of the old Calvinistic creed have been nearly eradicated. Its professors, indeed, may still contend as stoutly as ever for the old formularies of their hereditary faith, as they might fight for any other party banner; but their fanatical devotion to its dogmas, and their contempt for all other Christian churches, has happily softened down or disappeared.

The poem opens with the arraignment of all "the quick and dead," who are summoned before the throne of God, and, having each pleaded at the bar, are answered by their Judge. Some

of them declare that the Scriptures are "so dark, that they have puzzled the wisest men;" others that, being "heathens," and having never had "the written Word preached to them," they are entitled to pardon; in reply to which, the metaphysical subtleties of the doctrines of election and grace are fully propounded. The next class of offenders might awaken the sympathies of any heart not protected by a breastplate of theological dogmatism:—

"Then to the bar all they drew near
Who died in infancy,
And never had, or good or bad,
Effected personally," &c.

These infants remonstrate against the hardship of having Adam's guilt laid to their charge:—

"Not we, but he, ate of the tree
Whose fruit was interdicted;
Yet on us all, of his sad fall,
The punishment's inflicted."

The Judge replies, that none can suffer "for what they never did:"—

(171.) "But what you call old Adam's fall,
And only his trespass,
You call amiss to call it his,
Both his and yours it was.

(172.) "He was designed, of all mankind,
To be a public head;
A common root, whence all should shoot,
And stood in all their stead.

"He stood and fell, did ill and well
Not for himself alone,
But for you all, who now his fall
And trespass would disown.

(173.) "If he he had stood, then all his brood
Had been established," &c.

(174.) "Would you have grieved to have received
Though Adam so much good?" &c.

"Since then to share in his welfare
You would have been content,
You may with reason, share in his treason,
And in his punishment."

A great body of Scripture texts are here introduced in confirmation; but the children are told, even including those "who from the womb unto the tomb were straightway carried," that they are to have "the easiest room in hell:"—

(181.) "The glorious King, thus answering,
They cease, and plead no longer,
Their consciences must needs confess
His reasons are the stronger."

The pains of hell and the constant renovation of strength to enable the "sinful wight" to bear an eternity of torment, are then dilated upon at such length, and so minutely, and a picture so harrowing to the soul is drawn, as to remind us of the excellent observations on this head of a modern New England divine. "It is not wonderful," he says, "that this means of subjugating the mind should be freely used and dreadfully perverted, when we consider that no talent is required to inspire fear, and that coarse minds and hard hearts are signally gifted for this work of torture." "It is an instrument of tremendous power," he adds, "enabling a Protestant minister, whilst disclaiming papal pretensions, to build up a spiritual despotism, and to beget in those committed to his guidance a passive, servile state of mind, too agitated for deliberate and vigorous thought." *

That the pious minister of Malden, however, had no desire to usurp any undue influence over his panic-stricken hearers, is very probable, and that he was only indulging in the usual strain of the preachers of his time, when he told of the "yelling of the damned, as they were burnt eternally in the company of devils," and went on to describe how—

"God's vengeance feeds the flame
With piles of wood and brimstone flood,
That none can quench the same."

We next learn that the peace and calm blessedness of the saints elect, who are received into heaven, is not permitted to be disturbed by compassion for the damned; mothers and fathers feeling no pity for their lost children:—

* Channing's Works, London, vol. iii. p. 263.

"The godly wife conceives no grief,
Nor can she shed a tear,
For the sad fate of her dear mate
When she his doom doth hear."

The great distinction between the spirit of the times when these verses were written and the present age, appears to be this, that a paramount importance was then attached to those doctrinal points in which the leading sects differed from each other, whereas now Christianity is more generally considered to consist essentially in believing and obeying those scriptural precepts on which all churches agree.

CHAPTER IV.

Journey from Portland to the White Mountains.—Plants.—Churches, School-houses.—Temperance Hotel.—Intelligence of New Englanders.—Climate, Consumption.—Conway.—Division of Property.—Every Man his own Tenant.—Autumnal Tints.—Bears hybernating.—Willey Slide.—Theory of Scratches and Grooves on Rocks.—Scenery.—Waterfalls and Ravines.—The Notch.—Forest Trees and Mountain Plants.—Fabyan's Hotel.—Echo.

Sept. 28, 1845.—Leaving Portland and the sea-coast, we now struck inland in a westerly direction toward the White Mountains, having hired a carriage which carried us to Standish. We passed at first over a low, featureless country, but enlivened by the brilliant autumnal coloring of the foliage, especially the bright red, purple, and yellow tints of the maple. The leaves of these trees and of the scrub oak had been made to change color by the late frost of the 10th of this month. On the borders of the road, on each side, mixed with the fragrant "sweet fern," we saw abundance of the *Spiræa tomentosa*, its spike of purplish flowers now nearly faded. The name of "hard hack" was given to it by the first settlers, because the stalk turned the edge of the mower's scythe. There were also golden rods, everlastings, and asters in profusion; one of the asters being called "frost blow," because flowering after the first frost. We also gathered on the ground the red fruit of the checkerberry (*Gaulteria procumbens*), used in New England to flavor sweetmeats. By the side of these indigenous plants was the common English self-heal (*Prunella vulgaris*), the mullein (*Verbascum thapsus*), and other flowers, reminding me of the remark of an American botanist, that New England has become the garden of European weeds; so that in some agricultural counties near the coast, such as Essex in Massachusetts, the exotics almost outnumber the native plants. It is, however, found, that the farther we travel northward, toward the region where North America and Europe approach

each other, the proportion of plants specifically common to the two continents is constantly on the increase; whereas in passing to the more southern states of the Union, we find almost every indigenous species to be distinct from European plants.

Although the nights are cold, the sun at mid-day is very hot, the contrast of temperature in the course of each twenty-four hours being great, like that of the summer and winter of this climate.

We journeyed on over very tolerable roads without paying turnpikes, one only, I am told, being established in all Maine. The expenses of making and repairing the highways are defrayed by local taxes, a surveyor being appointed for each district. We went through the villages of Gorham, Standish, Baldwin, Hiram, and Bloomfield, to Conway, and then began to enter the mountains, the scenery constantly improving as we proceeded. Here and there we saw Indian corn cultivated, but the summer of Maine and New Hampshire is often too short to bring this grain to maturity.

Usually, in a single village, we saw three, four, or five churches, each representing a different denomination; the Congregationalists, Baptists, Methodists, and now and then, though more rarely, the Unitarians. Occasionally, in some quiet spot where two village roads cross, we saw a small, simple building, and learned that it was the free or common school provided by law, open to all, not accepted as a bounty, but claimed as a right, where the children of rich and poor, high and low, and of every sect, meet upon perfect equality. It is a received political maxim here, that society is bound to provide education, as well as security of life and property, for all its members.

One evening, as we were drawing near to a straggling village, in the twilight, we were recommended by a traveler, whom we had met on the road, to take up our quarters at a temperance hotel, where, he said, "there would be no loafers lounging and drinking drams in the bar-room." We looked out for the sign, and soon saw it, surmounted by a martin-house of four stories, each diminishing in size from the bottom to the top, but all the apartments now empty, the birds having taken flight, warned by

the late frost. We had, indeed, been struck with the dearth of the feathered tribe in Maine at this season, the greater number of birds being migratory. As soon as our carriage stopped at the door, we were ushered by the host and his wife into a small parlor, where we found a blazing wood fire. It was their private sitting-room at times, when they had no guests, and on the table were books on a variety of subjects, but most of them of a religious or serious character, as Bishop Watson's Apology in reply to Tom Paine. We saw, also, a treatise on Phrenology, styled "The only True Philosophy," and Shakspeare, and the poems of Cowper and Walter Scott. In each window were placed two chairs, not ready to be occupied, as they would be in most countries, but placed face to face, or with their fronts touching each other, the usual fashion in New England.

On one of the walls was seen, in a gilt frame, the Declaration of Independence, with all the signatures of the subscribers, surrounded by vignettes or portraits of all the ten presidents of the United States, from General Washington to Mr. Tyler. On another side of the room was a most formidable likeness of Daniel Webster, being an engraving published in Connecticut. Leaning over the portrait of the great statesman, is represented an aged man holding a lantern in his hand, and, lest the meaning of so classical an allusion should be lost, we read below—

> "Diogenes his lantern needs no more,
> An honest man is found, the search is o'er."

While supper was preparing, I turned over a heap of newspapers, of various shades of politics. One of them contained a spirited reply to the leading article of an extreme democratic journal, which had enlarged on a favorite text of the popular party, "The whole of Oregon is ours." In another I saw, in large type, "The continent, the whole continent down to the isthmus;" so that, before Texas is yet fairly annexed, the imagination of the "more territory" zealots has incorporated all Mexico, if not Central America, into the Union. In the obituaries were recorded, as usual, the names of several "revolutionary soldiers," aged eighty-five and ninety, and I spent some minutes

in wondering why they who fought for republican independence had been so frequently rewarded with longevity, till it occurred to me that, he who took the field before 1776 could not die a juvenile in 1845. Among other electioneering addresses, I read the following: "Fellow democrats, the Philistines are upon us, the whigs are striving to sow dissension in our ranks, but our object must be to place in the senate a sterling democrat," &c. Such an appeal to electors who are to fill up a vacancy in the more conservative branch of the Congress at Washington, is sufficiently startling to an Englishman. Another article, headed, "Henry Clay, President for 1848," seemed a most premature anticipation of a future and distant contest, Mr. Polk having just been chosen for the next four years as first magistrate, after many months of excitement and political turmoil. Yet, upon the whole, the provincial newspapers appear to me to abound in useful and instructive matter, with many well-selected extracts from modern publications, especially travels, abstracts of lectures on temperance or literary and scientific subjects, letters on agriculture, or some point of political economy or commercial legislation. Even in party politics, the cheapness of the innumerable daily and weekly papers enables every villager to read what is said on more than one side of each question, and this has a tendency to make the multitude think for themselves, and become well informed on public affairs.

We happened to be the only strangers in the tavern, and, when supper was brought in by the landlord and his wife, they sat down beside us, begged us to feel at home, pressed us to eat, and evidently considered us more in the light of guests whom they must entertain hospitably, than as customers. Our hostess, in particular, who had a number of young children and no nurse to help her, was willing to put herself to some inconvenience rather than run the risk of our feeling lonely. Their manners were pleasing, and, when they learned that we were from England, they asked many questions about the free-kirk movement in Scotland, and how far the system of national education there differed from that in Prussia, on which the landlord had been reading an article in a magazine. They were greatly amused

when I told them that some of the patriots of their State had betrayed to me no slight sensitiveness and indignation about an expression imputed to Lord Palmerston in a recent debate on the Canadian border-feud, when he spoke of "the *wild* people of Maine."

They were most curious to learn the names of the rocks and plants we had collected, and told us that at the free-school they had been taught the elements of geology and botany. They informed us that in these rural districts, many who teach in the winter months spend the money they receive for their salary in educating themselves in some college during the remainder of the year; so that a clever youth may in this way rise from the humblest station to the bar or pulpit, or become a teacher in a large town. Farm laborers in the State, besides being boarded and found in clothes, receive ten dollars, or two guineas, a month wages, out of which they may save and "go west," an expression every where equivalent to bettering one's condition. "The prospect of heaven itself," says Cooper, in one of his novels, "would have no charms for an American of the back-woods, if he thought there was any place farther west."

I remarked that most of the farmers and laborers had pale complexions and a care-worn look. "This was owing partly," said the landlord, "to the climate, for many were consumptive, and the changes from intense heat to great cold are excessive here; and partly to the ambitious, striving character of the natives, who are not content to avoid poverty, but expect, and not without reason, to end their days in a station far above that from which they start." We were struck with the almost entire absence of the negro race in Maine, the winter of this State being ill suited to them. The free blacks are in great part paupers, and supported by the poor laws. We fell in with a few parties of itinerant Indians, roaming about the country like our gipsies.

Resuming our journey, we stopped at an inn where a great many mechanics boarded, taking three meals a day at the ordinary. They were well dressed, but their coarse (though clean) hands announced their ordinary occupation. After dinner several

of them went into the drawing-room, where some "ladies" of their own class were playing on a piano-forte; other mechanics were reading newspapers and books, but after a short stay they all returned to their work. On looking at the books they had laid down, I found that one was D'Israeli's "Coningsby," another Burns' Poems, and a third an article just reprinted from Frazer's Magazine, on "the Policy of Sir Robert Peel."

As we passed through Conway, seeing there was but one meeting-house, I asked to what denomination it belonged. The reply was, "Orthodox." I went on to say that the place seemed to be thriving. My informant replied, with evident satisfaction, "Yes, and every man here is his own tenant," meaning that they all owned the houses and lands they occupied. To be a lessee, indeed, of a farm, where acres may be bought so cheap, is a rare exception to the general rule throughout the United States. The approach to an equal subdivision of property among children, is not the result here of a compulsory law, as in France, but of custom; and I was surprised to find how much the partition is modified, according to the individual views of the testator. I was assured, indeed, by persons on whose authority I could depend, that in nine cases out of ten the small working farmers in New England do not leave their property in equal shares to their children, as the law would distribute it if they died intestate. It is very common, for example, to leave the sons twice as much as the daughters, and frequently to give the eldest son the land, requiring him to pay small legacies to the others. In the case of one of my acquaintances, where the sons had larger shares than the daughters, it was provided, that if one of the two brothers died, the other should take all his share. As a general rule, the larger the estate the greater is the inequality of partition among the children. When I inquired into the manner in which the twelve or fourteen largest fortunes, such as would rank as considerable in England, had been bequeathed in Boston and its vicinity, and in New York, I was astonished to learn that none of them had been left in equal shares among the children by men of English descent, the one and only exception being that of a Frenchman. In the more newly settled states, there is less in-

equality in the distribution both of real and personal property; but this is doubtless in no small degree connected with the more moderate size of the fortunes there. The ideas entertained in some of these ruder parts of the country, of the extreme destitution of the younger children of aristocratic families in Great Britain, are often most mistaken and absurd; though particular instances in Scotland, springing out of the old system of entails, may have naturally given rise to erroneous generalizations. It was evident to me that few, if any, of these critics, had ever regarded primogeniture as an integral portion of a great political system, wholly different from their own, the merits of which can not fairly be tried by a republican standard.

Both in New England and in the State of New York, I heard many complaints of the inadequacy of the capital belonging to small landed proprietors to make their acres yield the greatest amount of produce with the least expenditure of means. They are often so crippled with debt and mortgages, paying high interest, that they can not introduce many improvements in agriculture, of which they are by no means ignorant. Nevertheless, the farmers here constitute a body of resident yeomen, industrious and intelligent; absenteeism being almost unknown, owing to the great difficulty of letting farms, and the owners being spread equally over the whole country, to look after the roads and village-schools, and to see that there is a post-office even in each remote mountain hamlet. The pride and satisfaction felt by men who till the land which is their own, is, moreover, no small advantage, although one which a political economist, treating solely of the production of wealth, may regard as lying out of his province. As a make-weight, however, in our estimate of the amount of national happiness derived from landed property, it is not to be despised; and where "every man is his own tenant," as at Conway, the evils of short leases, of ejectments on political grounds, or disputes about poaching and crimes connected with the game-laws are unknown.

After passing Conway, we had fairly entered the mountains of New Hampshire, and enjoyed some rambles over the hills, delighted with the sound of rushing torrents and the wildness of

the scenery. I had sometimes remarked in Norway that the birch trees are so equally intermixed with dark pines, as to impart, by the contrast of colors, a spotted appearance to the woods, not always picturesque; but here I saw the dark green hemlock in one place, and the maples, with their brilliant autumnal foliage in another, grouped in such masses on the steep slopes of the hills, as to produce a most agreeable effect. There were many birch trees, with their white bark, and oaks, with red autumnal tints, and an undergrowth of kalmia out of flower, but still conspicuous by its shining leaves. The sweet fern (*Comptonia*) no longer appeared on this high ground, and was replaced by the true fern, called here "brake," being our common English species (*Pteris aquilina*). On the low hills of granite were many huge angular fragments of that rock, fifteen, and some of them twenty feet in diameter, resting on heaps of sand. They were of a light gray color, with large crystals of felspar, and reminded me of the granite of Arran in Scotland. As we followed the windings of the river Saco, I observed, in the bottom of the valley, alluvial terraces, composed of clay, sand, gravel, and boulders, forming flats at different elevations, as we see in many parts of Scotland, and other mountain valleys in Europe.

Although we heard much talk of the late frost, there were still abundant signs of the sun's power, such as large grasshoppers, with red wings, called here shakers, and tortoises (*Testudo picta*) wandering from one pond to another. In the retired paths many squirrels allowed us to pass very near to them without being alarmed. The bear once extended, like the beaver, over the whole of New England; but the beaver has been every where extirpated, and the bear driven into the mountains. From these retreats they still make annual depredations on the fields of Indian corn, and the farmers retaliate, not only by thinning them with their rifles, but by taking what some sportsmen would consider a very unfair advantage over them. On the first spring-like day, Bruin, who has been hybernating for several months in a cave, ventures out, before the snow has quite melted, to take a look at the country; then retires again to his hiding place, which the hunter discovers by following his foot tracks on the snow, and

digs him out of his hole. Near Bartlett I was taken to see the skeleton of a bear that had been lately killed. The farmers told me that the racoons do much damage here, by devouring the Indian corn, but the opossum does not extend so far to the north.

On the second day after leaving Conway we entered a wild and narrow mountain pass, with steep declivities on both sides, where the hills can not be less than 1000 or 1500 feet in vertical height. Here the famous landslip, called the Willey Slide, occurred in August, 1826. The avalanche of earth, stones, and trees occurring after heavy rains, was so sudden, that it overwhelmed all the Willey family, nine in number, who would have escaped had they remained in their humble dwelling; for, just above it, the muddy torrent was divided into two branches by a projecting rock. The day after the catastrophe a candle was found on the table of their deserted room, burnt down to the socket, and the Bible lying open beside it.

I was curious to examine the effects of this and other slides of the same date in the White Mountains, to ascertain what effect the passage of mud and heavy stones might have had in furrowing the hard surfaces of bared rocks over which they had passed; it having been a matter of controversy among geologists, how far those straight rectilinear grooves and scratches before alluded to,* might have been the result of glacial action, or whether they can be accounted for by assuming that deluges of mud and heavy stones have swept over the dry land. A finer opportunity of testing the adequacy of the cause last mentioned can not be conceived than is afforded by these hills; for, in consequence, apparently, of the jointed structure of the rocks and their decomposition produced by great variations of temperature (for they are subjected to intense summer heat and winter's cold in the course of the year), there is always a considerable mass of superficial detritus ready to be detached during very heavy rains, even where the steep slopes are covered with timber. Such avalanches begin from small points, and, after descending a few hundred yards, cut into the mountain side a deep trench, which becomes rapidly broader and deeper, and they bear down before them the loftiest

* Ante, p. 18.

trees, and the soil in which they are rooted. Some of these masses have slid two or three miles, with an average breadth of a quarter of a mile ; and so large are the rocky fragments, that I found some of them, which came down in the Willey Slide, to measure from fourteen to twenty feet in diameter. I also ascertrined that the steep slopes of bare rock over which they had passed, were inclined, in some instances, at angles of twenty to thirty degrees with the horizon. After clambering up more than 400 feet above the level of the Saco, on its right bank, I reached a space of naked rock, fifteen feet square, over which my guide, the elder Crawford, told me that the whole contents of the Willey Slide had swept in 1826 ; which was indeed evident, for it lay in the direct line of the great trench cut through the forest above and below.

There is a small cataract at the spot, where a dyke of basalt and greenstone, four or five feet wide, traverses the granite, all the rocks being smoothed on the surface, and marked with some irregular and short scratches and grooves ; but not such as resemble in continuity, straightness, or parallelism, those produced by a glacier, where hard stones, which grate along the bottom, have been firmly fixed in a heavy mass of ice, so that they can not be deflected from a rectilinear course.

I am aware that glaciers and icebergs are not the only means by which the grooving and polishing of the faces of rocks may be caused ; for similar effects may arise on the sides of fissures where stony masses have been rent asunder, and moved upward and downward, or made to vibrate during earthquakes, so that the opposite walls are rubbed against each other. But we can not attribute to this cause the superficial markings now commonly referred to glacial action in Europe and North America ; and what I saw at the Willey Slide, and other places in the White Mountains, convinced me that a semi-fluid mass of mud and stones must always have too much freedom of motion, and is too easily turned aside by every obstacle and inequality in the shape of the rocky floor, to enable it to sculpture out long and straight furrows.

From the Willey Slide we continued our way along the bot-

tom of the narrow valley of the Saco, listening with pleasure to the river as it foamed and roared over its stony bed, and admiring two water-falls, broken into sheets of white foam in their descent. The scene became more grand as we entered the defile called the Notch, where, although the sun was high, the lofty crags threw dark shadows across our path. On either hand were wild and nearly perpendicular precipices, the road, on the side overhanging the Saco, being usually protected by parapets of stone or timber. A steep ascent led us up to a kind of pass or water-shed, where there was an inn kept by one of the Crawford family, well known in this region, which reminded me of some of those hotels perched in similar wild situations in the Alps, as on the Simplon and Grimsel. We learned that snow had fallen here in the second week of September, and the higher hills had been whitened for a time; but they are now again uncovered. Already the elevation has produced a marked change in the vegetation—the hemlock, the spruce, the balm of Gilead fir (*Pinus balsamea*), and the white pine, beginning to form, with the birch, a large proportion of the forest trees. The white pine, called in England the Weymouth pine (*Pinus strobus*), is the most magnificent in size. It sometimes attains a diameter of five feet, and a height of 150 feet, both here and in other parts of New Hampshire and Maine; but it is very rare to meet with such trees now, the finest having been burnt down in the great fires which have every where devastated the woods. I observed the boughs of the spruce hung with a graceful white lichen, called Old Man's Beard (*Usnea barbata*), a European species. The common fern (*Pteris aquilina*), now covers the moist ground under the dark shade of the woods, and all the rotting trunks of fallen trees are matted over with a beautiful green carpet of moss, formed almost entirely of the feathery leaves of one of the most elegant of the tribe, also occurring in Scotland (*Hypnum Crista castrensis*). Several kinds of club moss (*Lycopodium*), which, like the *Hypnum*, were in full fructification, form also a conspicuous part of the herbage; especially one species, standing erect like a miniature tree, whence its name, *L. dendroideum*, from six to eight inches high.

Oct. 5.—Penetrating still further into the mountains, we established ourselves in pleasant quarters for several days at Fabyan's Hotel, thirty-two miles from Conway, waiting for fine weather to ascend Mount Washington. Whenever the rain ceased for a few hours we explored the lower hills, and were fortunate enough to have, as a companion in our walks, one of the ablest botanists in America, Mr. William Oakes,* of Ipswich, Massachusetts, who is preparing for publication a fine work on the Flora of the White Mountains. In one of our excursions with him to see the falls of the river Amoonosuc, he showed us several places where the *Linnæa borealis* was growing, now in fruit. I had seen this plant in flower in Nova Scotia in July, 1842, but was not prepared to find it extending so much farther southward, having first known it as characteristic of Norway, and of great Alpine heights in Europe. But I was still more surprised when I learned, from Mr. Oakes, that it descends even into the wooded plains of New Hampshire, under favor of a long winter and of summer fogs, near the sea. What is most singular, between Manchester and Cape Anne, lat 42° 30′ N., it inhabits the same swamp with the *Magnolia glauca*. The arctic *Linnæa*, trailing along the ground and protected from the sun by a magnolia, affords a curious example of the meeting of two plants of genera characteristic of very different latitudes, each on the extreme limits of its northern or southern range.

One evening, during our stay here, we enjoyed listening to the finest mountain echo I ever heard. Our host, Fabyan, played a few clear notes on a horn, which were distinctly repeated five times by the echo, in softened and melodious tones. The third repetition, although coming of course from a greater distance, was louder than the two first, which had a beautiful effect, and may be caused either by the concave form of the rocks being more favorable to the reflection of sound, or from the place where we stood being, in reference to that distant spot, more exactly in the focus of the ellipse.

In the elevated plain at the foot of the mountains at Fabyan's

* Since writing the above, I have heard, with deep regret, of the death of this amiable and accomplished naturalist.

there is a long superficial ridge of gravel, sand, and boulders, having the same appearance as those mounds which are termed "osar" in Sweden. It is a conspicuous object on the plain, and is called the Giant's Grave; but in general such geological appearances as are usually referred to the glacial or "drift" period are rare in these mountains; and I looked in vain for glacial furrows and striæ on a broad surface of smooth granite recently exposed on the banks of the Saco, in a pit where gravel had been taken out for the repair of the road. How far the rapid decomposition of the granite rocks, owing to the vast range of annual temperature, may have destroyed, in this high region, any markings originally imprinted on their surface, deserves consideration.

CHAPTER V.

Ascent of Mount Washington.—Mr. Oakes.—Zones of Distinct Vegetation.—Belt of Dwarf Firs.—Bald Region and Arctic Flora on Summit.—View from Summit.—Migration of Plants from Arctic Regions.—Change of Climate since Glacial Period.—Granitic Rocks of White Mountains.—Franconia Notch.—Revival at Bethlehem.—Millerite Movement.—The Tabernacle at Boston.—Mormons.—Remarks on New England Fanaticism.

Oct. 7, 1845.—At length, with a fair promise of brighter weather, we started at eight o'clock in the morning for the summit of Mount Washington. Its old Indian name of Agiocochook has been dropped, as too difficult for Anglo-Saxon ears or memories. Its summit is 6225 feet above the level of the sea; and we were congratulated on the prospect of finding it, at so late a season, entirely free from snow. Our party consisted of nine, all mounted on well-trained horses—Mr. Oakes, a gentleman and his wife, tourists from Maine, a young New England artist, myself, my wife, and three guides.

A ride of seven miles brought us to the foot of the mountain, and we then began to thread the dark mazes of the forest, through narrow winding paths, often crossing and re-crossing the bed of the same torrent, and fording its waters, which occupied, in spite of the late rains, a small part of their channel.

The first, or lowest zone of the mountain, extending from its base to the height of about 2000 feet, and 4000 feet above the level of the sea, is clothed with a great variety of wood. Besides the hemlock, spruce, Weymouth, and other pines before mentioned, there is the beech (*Fagus ferruginea*), three kinds of birch, the black, the yellow, and the white (*Betula lenta*, *B. lutea*, and *B. papyracea*); also the rock or sugar-maple (*Acer saccharinum*), and the red maple (*A. rubrum*), exhibiting autumnal tints of every color, from orange to pale yellow, and from scarlet to purple. The undergrowth was composed in part of a Guelder-

rose (*Viburnum lantanoides*), the Mexican laurustinus, and the service-tree (*Sorbus americana*), with *Acer montanum* and *Acer striatum*. On the ground we saw the beautiful dwarf dogwood (*Cornus canadensis*), still in flower, also the fruit of the avron, or cloud-berry, here called mulberry (*Rubus chamæmorus*), well known on the Grampians, and the wood-sorrel (*Oxalis acetosella*), in great quantity, with *Gaultheria hispidula*. There were many large prostrate trees in various stages of decay, and out of their trunks young fir-saplings, which had taken root on the bark, were seen growing erect.

We put up very few birds as we rode along, for the woods are much deserted at this season. A small lapwing, with a note resembling the English species, flew up from some marshy ground; and we saw a blue jay and a brown woodpecker among the trees, and occasionally a small bird like a tomtit (*Parus atrocapillus*). I picked up one land-shell only (*Helix thyoides*), and was surprised at the scarcity of air-breathing testacea here and elsewhere in New England, where there is so vigorous a vegetation and so much summer heat. The absence of lime in the granitic rocks is the chief cause; but even in the calcareous districts these shells are by no means as plentiful as in corresponding latitudes in Europe.

When we had passed through this lowest belt of wood the clouds cleared away, so that, on looking back to the westward, we had a fine view of the mountains of Vermont and the Camel's Hump, and were the more struck with the magnificent extent of the prospect, as it had not opened upon us gradually during our ascent. We then began to enter the second region, or zone of evergreens, consisting of the black spruce and the *Pinus balsamea*, which were at first mixed with other forest trees, all dwarfed in height, till at length, after we had ascended a few hundred feet, these two kinds of firs monopolized the entire ground. They are extremely dense, rising to about the height of a man's head, having evidently been prevented by the cold winds from continuing their upward growth beyond the level at which they are protected by the snow. All their vigor seems to have been exerted in throwing out numerous strong horizontal

or pendent branches, each tree covering a considerable area, and being closely interwoven with others, so that they surround the mountain with a formidable hedge about a quarter of a mile broad. The innumerable dead boughs, which, after growing for a time, during a series of milder seasons, to a greater height, have then been killed by the keen blast, present a singular appearance. They are forked and leafless, and look like the antlers of an enormous herd of deer or elk. This thicket opposed a serious obstacle to those who first ascended the mountain thirty years ago. Dr. Francis Boott, among others, whose description of his ascent in 1816, given to me in London several years before, made me resolve one day to visit the scene, was compelled, with his companion, Dr. Bigelow, to climb over the tops and walk on the branches of these trees, until they came to the bald region. A traveler now passes so rapidly through the open pathway cut through this belt of firs, that he is in danger, while admiring the distant view, of overlooking its peculiarities. The trees become gradually lower and lower as you ascend, till at length they trail along the ground only two or three inches high; and I actually observed, at the upper margin of this zone, that the spruce was topped in its average height by the common reindeer moss (*Lichen rangeferinus*). According to Dr. Bigelow,* the upper edge of the belt of dwarf firs is at the height of 4443 feet above the sea. After crossing it we emerged into the bald region, devoid of wood, and had still to climb 1800 feet higher, before arriving at the summit. Here our long cavalcade was seen zigzagging its way in single file up a steep declivity of naked rock, consisting of gneiss and mica schist, but principally the latter rock intermixed with much white quartz. The masses of quartz are so generally overgrown with that bright-colored yellowish-green lichen, so common on the Scotch mountains (*Lichen geographicus*), that the whole surface acquires a corresponding tint, visible from a great distance. This highest region is characterized by an assemblage of Alpine or Arctic plants, now no longer in flower, and by a variety of mosses and

* See his excellent account of an ascent of Mount Washington in 1816, Boston Medical Journal, vol. v. p. 321.

lichens specifically identical with those of Northern Europe. Among these, we saw on the rocks the *Parmelia centrifuga*, a lichen common in Sweden, but not yet met with in Great Britain, of a greenish-white color, which, commencing its growth from a point, gradually spreads on all sides, and deserts the central space. It then assumes an annular form, and its reddish-brown shields of fructification, scattered over the margin, remind one, though on a miniature scale, of those "fairy rings" on our English lawns, which appear to be unknown in America, and where fungi, or mushrooms are seen growing in a circle.

The flora of the uppermost region of Mount Washington consists of species which are natives of the cold climate of Labrador, Lapland, Greenland, and Siberia, and are impatient, says Bigelow, of drought, as well as of both extremes of heat and cold; they are therefore not at all fitted to flourish in the ordinary climate of New England. But they are preserved here, during winter, from injury, by a great depth of snow, and the air in summer never attains, at this elevation, too high a temperature, while the ground below is always cool. When the snow melts, they shoot up instantly with vigor proportioned to the length of time they have been dormant, rapidly unfold their flowers, and mature their fruits, and run through the whole course of their vegetation in a few weeks, irrigated by clouds and mist.

Among other Alpine plants, we gathered on the summit *Menziesia cerulea*, and *Rhododendron laponicum*, both out of flower; and not far below, *Azulea procumbens*. Mr. Oakes pointed out to me, in a rent several hundred feet above the lower margin of the bald region, a spruce fir growing in the cleft of a rock, where it was sheltered from the winds, clearly showing that the sudden cessation of the trees does not arise from mere intensity of cold. We found no snow on the summit, but the air was piercing, and for a time we were enveloped in a cloud of dense white fog, which, sailing past us, suddenly disclosed a most brilliant picture. On the slope of the mountain below us, were seen woods warmly colored with their autumnal tints, and lighted up by a bright sun; and in the distance a vast plain, stretching eastward to Portland, with many silver lakes, and

beyond these the ocean and blue sky. It was like a vision seen in the clouds, and we were occasionally reminded of "the dissolving views," when the landscape slowly faded away, and then, in a few minutes, as the fog dispersed, regained its strength as gradually, till every feature became again clear and well defined.

We at length returned to the hotel in the dusk of the evening, much delighted with our excursion, although too fatiguing for a lady, my wife having been twelve hours on horseback. If an inn should be built at the foot of the mountain, the exploit will be comparatively an easy one, and in a few years a railway from Boston, only 150 miles distant (100 miles of it being already completed), will enable any citizen to escape from the summer heat, and, having slept the first night at this inn, enjoy, the next morning, if he is a lover of botany, the sight of a variety of rare and beautiful Arctic plants in full flower, besides beholding a succession of distinct zones of vegetation, scarcely surpassed on the flanks of Mount Etna or the Pyrenees.

If we attempt to speculate on the manner in which the peculiar species of plants now established on the highest summits of the White Mountains, were enabled to reach those isolated spots, while none of them are met with in the lower lands around, or for a great distance to the north, we shall find ourselves engaged in trying to solve a philosophical problem, which requires the aid, not of botany alone, but of geology, or a knowledge of the geographical changes which immediately preceded the present state of the earth's surface. We have to explain how an Arctic flora, consisting of plants specifically identical with those which now inhabit lands bordering the sea in the extreme north of America, Europe, and Asia, could get to the top of Mount Washington. Now geology teaches us that the species living at present on the earth are older than many parts of our existing continents; that is to say, they were created before a large part of the existing mountains, valleys, plains, lakes, rivers, and seas were formed. That such must be the case in regard to the island of Sicily, I announced my conviction in 1833, after first returning from that country.* And a similar conclusion is no

* Principles of Geology, 1st edition, vol. iii. chap. 9.

less obvious to any naturalist who has studied the structure of North America, and observed the wide area occupied by the modern or glacial deposits before alluded to,* in which marine fossil shells of living but northern species are entombed. It is clear that a great portion of Canada, and the country surrounding the great lakes, was submerged beneath the ocean when recent species of mollusca flourished, of which the fossil remains occur more than 500 feet above the level of the sea near Montreal. I have already stated that Lake Champlain was a gulf of the sea at that period, that large areas in Maine were under water, and, I may add, that the White Mountains must then have constituted an island, or group of islands. Yet, as this period is so modern in the earth's history as to belong to the epoch of the existing marine fauna, it is fair to infer that the Arctic flora now contemporary with man was then also established on the globe.

A careful study of the present distribution of animals and plants over the globe, has led nearly all the best naturalists to the opinion that each species had its origin in a single birth-place, and spread gradually from its original center, to all accessible spots fit for its habitation, by means of the powers of migration given to it from the first. If we adopt this view, or the doctrine of "specific centers," there is no difficulty in comprehending how the *cryptogamous* plants of Siberia, Lapland, Greenland, and Labrador scaled the heights of Mount Washington, because the sporules of the fungi, lichens, and mosses may be wafted through the air for indefinite distances, like smoke; and, in fact, heavier particles are actually known to have been carried for thousands of miles by the wind. But the cause of the occurrence of Arctic plants of the *phænogamous* class on the top of the New Hampshire mountains, specifically identical with those of remote Polar regions, is by no means so obvious. They could not, in the present condition of the earth, effect a passage over the intervening low lands, because the extreme heat of summer and cold of winter would be fatal to them. Even if they were brought from the northern parts of Asia, Europe, and America, and

* Ante, p. 33.

thousands of them planted round the foot of Mount Washington, they would never be able, in any number of years, to make their way to its summit. We must suppose, therefore, that originally they extended their range in the same way as the flowering plants now inhabiting Arctic and Antarctic lands disseminate themselves. The innumerable islands in the Polar seas are tenanted by the same species of plants, some of which are conveyed as seeds by animals over the ice when the sea is frozen in winter, or by birds; while a still larger number are transported by floating icebergs, on which soil containing the seeds of plants may be carried in a single year for hundreds of miles. A great body of geological evidence has now been brought together, to some of which I have adverted in a former chapter,* to show that this machinery for scattering plants, as well as for carrying erratic blocks southward, and polishing and grooving the floor of the ancient ocean, extended in the western hemisphere to lower latitudes than the White Mountains. When these last still constituted islands, in a sea chilled by the melting of floating ice, we may assume that they were covered entirely by a flora like that now confined to the uppermost or treeless region of the mountains. As the continent grew by the slow upheaval of the land, and the islands gained in height, and the climate around their base grew milder, the Arctic plants would retreat to higher and higher zones, and finally occupy an elevated area, which probably had been at first, or in the glacial period, always covered with perpetual snow. Meanwhile the newly-formed plains around the base of the mountain, to which northern species of plants could not spread, would be occupied by others migrating from the south, and perhaps by many trees, shrubs, and plants then first created, and remaining to this day peculiar to North America.†

The period when the White Mountains ceased to be a group of islands, or when, by the emergence of the surrounding low

* Ante, p. 17.

† For speculations on analogous botanical and geographical changes in Europe, the reader may refer with advantage to an excellent essay by Professor Edward Forbes, on the Origin of the British Fauna and Flora, Memoirs of Geol. Survey of Great Britain, vol. i. p. 336. 1846.

lands, they first became connected with the continent, is, as we have seen, of very modern date, geologically speaking. It is, in fact, so recent as to belong to the epoch when species now contemporaneous with man already inhabited this planet. But if we attempt to carry our retrospect still farther into the past, and to go back to the date when the rocks themselves of the White Mountains originated, we are lost in times of extreme antiquity. No light is thrown on this inquiry by embedded organic remains, of which the strata of gneiss, mica schist, clay-slate, and quartzite are wholly devoid. These masses are traversed by numerous veins of granite and greenstone, which are therefore newer than the stratified crystalline rocks which they intersect; and the abrupt manner in which these veins terminate at the surface attests how much denudation or removal by water of solid matter has taken place. Another question of a chronological kind may yet deserve attention, namely, the epoch of the movements which threw the beds of gneiss and the associated rocks into their present bent, disturbed, and vertical positions. This subject is also involved in considerable obscurity, although it seems highly probable that the crystalline strata of New Hampshire acquired their internal arrangement at the same time as the fossiliferous beds of the Appalachian or Alleghany chain: and we know that they assumed their actual strike and dip subsequently to the origin of the coal measures, which enter so largely into the structure of that chain.

From Fabyan's Inn, at the foot of Mount Washington, we traveled about twenty-five miles westward to Bethlehem, and thence southward to the Franconia Notch, a deep and picturesque ravine in the mountains of granite. On the way I conversed with the driver of our carriage about the village churches, and, being very communicative, he told me he was a Free-will Baptist, but had only become a Christian five years ago, when he was awakened from a state of indifference by a revival which took place near Bethlehem. This meeting, he said, was got up and managed by the Methodists; but some Baptists, and one orthodox (Independent or Congregationalist) minister had assisted, in all sixteen ministers, and for twenty-one days in succession there

had been prayers and preaching incessantly from morning to night. I had already seen in a New York paper the following advertisement: "A protracted meeting is now in progress at the —— church in —— Street. There have been a number of conversions, and it is hoped the work of grace has but just commenced. Preaching every evening: seats free." I was surprised to hear of the union of ministers of more than one denomination on this occasion, and, on inquiry, was told by a Methodist, that no Episcopalians would join, "because they do not sufficiently rely on regeneration and the new man." It appears, indeed, to be essential to the efficacy of this species of excitement, that there should be a previous belief that each may hope at a particular moment "to receive comfort," as they term it, or that their conversion may be as sudden as was that of St. Paul. A Boston friend assured me that when he once attended a revival sermon, he heard the preacher describe the symptoms which they might expect to experience on the first, second, and third day previous to their conversion, just as a medical lecturer might expatiate to his pupils on the progress of a well-known disease; and "the complaint," he added, "is indeed a serious one, and very contagious, when the feelings have obtained an entire control over the judgment, and the new convert is in the power of the preacher. He himself is often worked up to such a pitch of enthusiasm, as to have lost all command over his own heated imagination."

It is the great object of the ministers who officiate on these occasions to keep up a perpetual excitement; but while they are endeavoring by personal appeals to overcome the apathy of dull, slow, and insensible minds, they run the risk of driving others, of weaker nerves and a more sensitive temperament, who are sitting on "the anxious benches," to the very verge of distraction.

My friend, the driver, was evidently one of a slow and unexcitable disposition, and had been led for the first time in his life to think seriously on religious matters by what he heard at the great preaching near Bethlehem; but it is admitted, and deplored by the advocates of revivals, that after the application of such violent stimulants there is invariably a reaction, and what they

call a flat or dead season. The emotions are so strong as to exhaust both the body and mind; and it is creditable to the New England clergy of all sects, that they have in general, of late years, almost entirely discontinued such meetings.

At the Franconia hotel I first heard of the recent fanatical movement of the Millerites, or followers of one Miller, who taught that the millennium, or final destruction of the world, would come to pass last year, or on the 23d day of October, 1844. A farmer from the village of Lisbon told me that, in the course of the preceding autumn, many of his neighbors would neither reap their harvest of Indian corn and potatoes, nor let others take in the crop, saying it was tempting Providence to store up grain for a season that could never arrive, the great catastrophe being so near at hand. These infatuated people, however, exerted themselves very diligently to save what remained of their property when the non-fulfillment of the prophecy dispelled their delusion. In several townships in this and the adjoining States, the parochial officers, or "select men," interfered, harvesting the crops at the public expense, and requiring the owners, after the 23d October, to repay them for the outlay.

I afterward heard many anecdotes respecting the Millerite movement, not a few of my informants speaking with marked indulgence of what they regarded simply as a miscalculation of a prophecy which must be accomplished at no distant date. In the township of Concord, New Hampshire, I was told of an old woman, who, on paying her annual rent for a house, said, "I guess this is the last rent you will get from me." Her landlord remarked, "If so, I hope you have got your robes ready;" alluding to the common practice of the faithful to prepare white ascension robes, "for going up into heaven." Hearing that there had been advertisements from shops in Boston and elsewhere to furnish any number of these robes on the shortest notice, I took for granted that they were meant as a hoax; but an English bookseller, residing at New York, assured me that there was a brisk demand for such articles, even as far south as Philadelphia, and that he knew two individuals in New York, who sat up all night in their shrouds on the 22d of October.

A caricature, published at Boston, represented Miller, the originator of the movement, ascending to heaven in his robes; but his chaplain, who was suspected of not being an enthusiast, but having an eye to the dollars freely thrown into "the Lord's Treasury," was weighed down by the money bags, and the devils were drawing him in an opposite direction. To keep up the excitement, several newspapers and periodicals were published in the interest of this sect, and I was told of several Methodist preachers who gave themselves up in full sincerity to the delusion. I asked an artisan who sat next me in a railway car in Massachusetts, whether he had heard any talk of the millennium in his district. "Certainly," he said; "I remember a tonguey jade coming down to our town, and many women, and even some smart, likely men, were carried away by her preaching. And, when the day was past, Miller explained how they had made a miscalculation, and that the end of the world would come three days later; and after that it was declared it would happen in the year 1847, which date was the more certain, because all the previous computations had failed, and that era alone remained to satisfy the prophecy."

In a subsequent part of our tour, several houses were pointed out to us, between Plymouth (Massachusetts) and Boston, the owners of which had been reduced from ease to poverty by their credulity, having sold their all toward building the Tabernacle, in which they were to pray incessantly for six weeks previous to their ascension. Among other stories which, whether true or not, proved to me how much fraud was imputed to some of the leaders, I was told of a young girl who, having no money, was advised to sell her necklace, which had been presented to her by her betrothed. The jeweler, seeing that she was much affected at parting with her treasure, and discovering the object of the sale, showed her some silver forks and spoons, on which he was about to engrave the initials of the very minister whose dupe she was, and those of the lady he was about to marry on a fixed day after the fated 23d of October.

The Tabernacle, above alluded to, was planned for the accommodation of between 2000 and 3000 persons, who were to meet,

pray, and "go up" at Boston; but, as it was intended merely for a temporary purpose, the fabric would have been very slight and insecure, had not the magistrates, fearing that it might fall into the street and kill some of the passers-by, interposed in good time, and required the architect to erect a substantial edifice. When the society of the Millerites was bankrupt, this Tabernacle was sold and fitted up as a theater; and there, in the course of the winter, we had the pleasure of seeing Mr. and Mrs. Kean perform Macbeth. Although under no apprehensions that the roof would fall in, yet, as all the seats were stuffed with hay, and there was only one door, we had some conversation during the performance as to what might be our chance of escape in the event of a fire. Only a few months later the whole edifice was actually burned to the ground, but fortunately no lives were lost. In one of the scenes of Macbeth, where Hecate is represented as going up to heaven, and singing, "Now I'm furnished for the flight—Now I fly," &c., some of our party told us they were reminded of the extraordinary sight they had witnessed in that room on the 23d of October of the previous year, when the walls were all covered with Hebrew and Greek texts, and when a crowd of devotees were praying in their ascension robes, in hourly expectation of the consummation of all things.

I observed to one of my New England friends, that the number of Millerite proselytes, and also the fact that the prophet of the nineteenth century, Joseph Smith, could reckon at the lowest estimate 60,000 followers in the United States, and, according to some accounts, 120,000, did not argue much in favor of the working of their plan of national education. "As for the Mormons," he replied, "you must bear in mind that they were largely recruited from the manufacturing districts of England and Wales, and from European emigrants recently arrived. They were drawn chiefly from an illiterate class in the western states, where society is in its rudest condition. The progress of the Millerites, however, although confined to a fraction of the population, reflects undoubtedly much discredit on the educational and religious training in New England; but since the year 1000, when all Christendom believed that the world was to come to an end,

there have never been wanting interpreters of prophecy, who have confidently assigned some exact date, and one near at hand, for the millennium. Your Faber on the Prophecies, and the writings of Croly, and even some articles in the Quarterly Review, helped for a time to keep up this spirit here, and make it fashionable. But the Millerite movement, like the recent exhibition of the Holy Coat at Treves, has done much to open men's minds; and the exertions made of late to check this fanatical movement, have advanced the cause of truth." He then went on to describe to me a sermon preached in one of the northeastern townships of Massachusetts, which he named, against the Millerite opinions, by the minister of the parish, who explained the doubts generally entertained by the learned in regard to some of the dates of the prophecies of Daniel, entered freely into modern controversies about the verbal inspiration of the Old and New Testament, and referred to several new works, both of German, British, and New England authors, which his congregation had never heard of till then. Not a few of them complained that they had been so long kept in the dark, that their minister must have entertained many of these opinions long before, and that he had now revealed them in order to stem the current of a popular delusion, and for expediency, rather than from the love of truth. "Never," said they, "can we in future put the same confidence in him again."

Other apologists observed to me, that so long as a part of the population was very ignorant, even the well-educated would occasionally participate in fanatical movements; "for religious enthusiasm, being very contagious, resembles a famine fever, which first attacks those who are starving, but afterward infects some of the healthiest and best-fed individuals in the whole community." This explanation, plausible and ingenious as it may appear, is, I believe, a fallacy. If they who have gone through school and college, and have been for years in the habit of listening to preachers, become the victims of popular fanaticism, it proves that, however accomplished and learned they may be, their reasoning powers have not been cultivated, their understandings have not been enlarged, they have not been trained in

habits of judging and thinking for themselves ; in fact, they are ill educated. Instead of being told that it is their duty carefully to investigate historical evidence for themselves, and to cherish an independent frame of mind, they have probably been brought up to think that a docile, submissive, and child-like deference to the authority of churchmen is the highest merit of a Christian. They have perhaps heard much about the pride of philosophy, and how all human learning is a snare. In matters connected with religion they have been accustomed blindly to resign themselves to the guidance of others, and hence are prepared to yield themselves up to the influence of any new pretender to superior sanctity who is a greater enthusiast than themselves.

CHAPTER VI.

Social Equality.—Position of Servants.—War with England.—Coalition of Northern Democrats, and Southern Slave-owners.—Ostracism of Wealth. —Legislators paid.—Envy in a Democracy.—Politics of the Country and the City.—Pledges at Elections.—Universal Suffrage.—Adventure in a Stage Coach.—Return from the White Mountains.—Plymouth in New Hampshire.—Congregational and Methodist Churches.—Theological Discussions of Fellow-Travelers.—Temperance Movement.—Post-Office Abuses.—Lowell Factories.

Oct. 10, 1845.—During our stay in the White Mountains, we were dining one day at the ordinary of the Franconia hotel, when a lawyer from Massachusetts pointed out to me "a lady" sitting opposite to us, whom he recognized as the chambermaid of an inn in the State of Maine, and he supposed "that her companion with whom she was talking might belong to the same station." I asked if he thought the waiters, who were as respectful to these guests as to us, were aware of their true position in society. "Probably they are so," he replied; "and, moreover, as the season is now almost over in these mountains, I presume that these gentlemen, who must have saved money here, will very soon indulge in some similar recreation, and make some excursion themselves." He then entered into conversation with the two ladies on a variety of topics, for the sake of drawing them out, treating them quite as equals; and certainly succeeded in proving to me that they had been well taught at school, had read good books, and could enjoy a tour and admire scenery as well as ourselves. "It is no small gratification to them," said he, "to sit on terms of equality with the silver fork gentry, dressed in their best clothes, as if they were in an orthodox meeting-house." I complimented him on carrying out in practice the American theory of social equality. As he had strong anti-slavery feelings, and was somewhat of an abolitionist, he said, "Yes, but you must not forget they have no dash of negro

blood in their veins." I remarked, that I had always inferred from the books of English travelers in the United States, that domestic service was held as somewhat of a degradation in New England. "I remember the time," he answered, "when such an idea was never entertained by any one here; but servants formerly used to live with their master and mistress, and have their meals at the same table. Of late years, the custom of boarding separately has gained ground, and work in factories is now preferred. These are so managed, that the daughters of farmers, and sometimes of our ministers, look upon them as most respectable places, where in three or four years they may earn a small sum toward their dowry, or which may help to pay off a mortgage or family debt."

As, during our stay here, the tone of the newspapers from Washington was somewhat bellicose, and we were proposing to make a tour of eight months in the southern states, I asked my legal companion whether he was really apprehensive of a war about Oregon. "No," he said, "there may be big words and much blustering, and perhaps, before the storm blows over, a war panic; but there will be no rupture with England, because it is against the interest of the slave-owners; for you know, I presume, that we are governed by the South, and our southern chivalry will put their veto on a war of which they would have to bear the brunt." "If," said I, "you are ruled by the slave-owning states, you may thank yourselves for it, the numerical, physical, intellectual, and moral power being on the side of the free states. Why do you knock under to them?" "You may well ask that question," he replied; "and, as a foreigner, may not easily be made to comprehend the political thralldom in which we, the majority of northerners, are still held, but which can not, I think, last much longer. Hitherto the southern planters have had more leisure to devote to politics than our small farmers or merchants in the north. They are banded together as one man in defense of what they call their property and institutions. They have a high bearing, which, in Congress, often imposes on northern men much superior to them in real talent, knowledge, and strength of character. They are

often eloquent, and have much political tact, and have formed a league with the unscrupulous demagogues here, and, by uniting with them, rule the country. For example, the mass of our population were strongly opposed to the extension of slavery, and voted at first against the annexation of Texas, yet they have been cajoled into the adoption of that measure."

"Do the slave-owners," I asked, "give bribes to the chiefs of your democratic party?" "No, our electors have too much self-respect and independence to accept of money bribes; but, by joining with their southern allies, they get what one of their party had recently the effrontery to call 'the spoils of the victor.' They are promoted to places in the custom-house or post-office, or sent on a foreign mission, or made district attorneys, or a lawyer may now and then be raised even to the bench of the Supreme Court; not one who is positively incompetent, but a man who, but for political services, would never have been selected for the highest honors in his profession."

I next told my friend that, when traveling in Maine, I had asked a gentleman why his neighbor, Mr. A., a rich and well-informed man, was not a member of their Legislature, and he had replied, "Because he is known to have so much wealth, both in land and money, that, if he were to stand, the people would not elect him." "Is it then," I inquired, "an avowed principle of the democracy, that the rich are to be ostracised?" and I went on to say that, in a club to which I belonged in London, we had a servant who, though very poor, had a vote as proprietor of a house, all the apartments of which he let out to different lodgers. When he was questioned why, at two successive elections, he had voted for candidates of exactly opposite opinions in politics, he explained by saying, "I make it a rule always to vote with my first floor." "I presume that if he migrated to New Hampshire or Maine, he would vote with his garret, instead of his first floor?"

"I have no doubt," said my companion, "that such an elector would side with the powers that be; and as the democracy has the upper hand here, as in Maine, he would have paid as servile a homage to the dominant party on this side of the Atlantic as

he did to the aristocracy of wealth in your country. Do you desire to see our people regard wealth as a leading qualification for their representatives?"

"Surely," said I, "it is an evil that men of good abilities, of leisure, and independent station, who have had the best means of obtaining a superior education, should be excluded from public life by that envy which seems to have so rank a growth in a democracy, owing to the vain efforts to realize a theory of equality. It must be a defect in your system, if there is no useful career open to young men of fortune. They are often ruined, I hear, for want of suitable employments."

"There are," he said, "comparatively few of them in the United States, where the law of primogeniture no longer prevails; and if we have good-for-nothing individuals among them, it is no more than may be said of your own aristocracy." He then named an example or two of New Englanders, who, having inherited considerable property, had yet risen to political distinction, and several more (four of whom I myself knew), who, having made large fortunes by their talents, had been members either of the State Legislature of Massachusetts or of Congress. He did not, however, deny that it is often good policy, in an election, for a rich candidate to affect to be poorer than he is. "Every one of our representatives," he added, "whether in the State Legislatures or in Congress, receives a certain sum daily when on duty, besides more than enough traveling money for carrying him to his post and home again. In choosing a delegate, therefore, the people consider themselves as patrons who are giving away a place; and if an opulent man offers himself, they are disposed to say, 'You have enough already, let us help some one as good as you who needs it.'"

During my subsequent stay in New England, I often conversed with men of the working classes on the same subject, and invariably found that they had made up their mind that it was not desirable to choose representatives from the wealthiest class. "The rich," they say, "have less sympathy with our opinions and feelings; love their amusements, and go shooting, fishing, and traveling; keep hospitable houses, and are inaccessible when

we want to talk with them, at all hours, and tell them *how we wish them to vote.*" I once asked a party of New England tradesmen whether, if Mr. B., already an eminent public man, came into a large fortune through his wife, as might soon be expected, he would stand a worse chance than before of being sent to Congress. The question gave rise to a discussion among themselves, and at last they assured me that they did not think his accession to a fortune would do him any harm. It clearly never struck them as possible that it could do him any good, or aid his chance of success.

The chief motive, I apprehend, of preferring a poorer candidate, is the desire of reducing the members of their Legislature to mere delegates. A rich man would be apt to have an opinion of his own, to be unwilling to make a sacrifice of his free agency; he would not always identify himself with the majority of his electors, condescend to become, like the wires of the electric telegraph, a mere piece of machinery for conveying to the Capitol of his State, or to Washington, the behests of the multitude. That there is, besides, a vulgar jealousy of superior wealth, especially in the less educated districts and newer states, I satisfied myself in the course of my tour; but in regard to envy, we must also bear in mind, on the other hand, that they who elevate to distinction one of their own class in society, have sometimes to achieve a greater victory over that passion than when they confer the same favor on one who occupies already, by virtue of great riches, a higher position.

In reference also to pledges exacted from representatives at an election, I am bound to mention some spirited letters which I saw published by Whig candidates in Massachusetts, who carried their election in spite of them. From one of these I quote the following words; "I must decline giving a direct reply to your specific questions; my general conduct and character as a public man, must be your guarantee. My votes are on record, my speeches are in print; if they do not inspire confidence, no pledges or declarations of purpose ought to do so."

It was part of General Jackson's policy, openly avowed by him in several of his presidential addresses, to persuade the small

farmers, mechanics, and laborers that they constituted the people, were the bone and sinew of the country, the real possessors of the national wealth, although in their hands it is subdivided into small shares; and he told them it was their business to make a constant effort to maintain their rights against the rich capitalists and moneyed corporations, who, by facilities of combining together, could usually make their own class interests prevail against a more numerous body, and one possessed in the aggregate of greater wealth.

It seems that they were not slow in taking this advice, for many merchants complained to me that the small farmers had too great an ascendency. No feature, indeed, appeared to me more contrasted in the political aspect of America and Great Britain than this, that in the United States the democracy derives its chief support from the landed interest, while the towns take the more conservative side, and are often accused by the landed proprietors of being too aristocratic. Every where the ambition of accumulating riches without limit is so manifest, as to incline me to adopt the opinion expressed to me by several rich Boston friends, that wealth has in this country quite as many charms, and confers as much distinction and influence, as it ought to do. If a rich Englishman came to settle here, he would be disappointed on finding that money gave him no facilities in taking a lead in politics; but the affluent natives do not pine for influence which they never possessed or expected to derive from their riches.

The great evil of universal suffrage is the irresistible temptation it affords to a needy set of adventurers to make politics a trade, and to devote all their time to agitation, electioneering, and flattering the passions of the multitude. The natural aristocracy of a republic consists of the most eminent men in the liberal professions—lawyers, divines, and physicians of note, merchants in extensive business, literary and scientific men of celebrity; and men of all these classes are apt to set too high a value on their time, to be willing to engage in the strife of elections perpetually going on, and in which they expose themselves to much calumny and accusations, which, however unfounded, are professionally injurious to them. The richer citizens, who might be more in-

dependent of such attacks, love their ease or their books, and from indolence often abandon the field to the more ignorant; but I met with many optimists who declared that whenever the country is threatened with any great danger or disgrace, there is a right-minded majority whose energies can be roused effectively into action. Nevertheless, the sacrifices required on such occasions to work upon the popular mind are so great, that the field is in danger of being left open, on all ordinary occasions, to the demagogue.

When I urged these and other objections against the working of their republican institutions, I was sometimes told that every political system has its inherent vices and defects, that the evil will soon be mitigated by the removal of ignorance and the improved education of the many. Sometimes, instead of an argument, they would ask me whether any of the British colonies are more prosperous in commerce, manufactures, or agriculture, or are doing as much to promote good schools, as some even of their most democratic states, such as New Hampshire and Maine? "Let our institutions," they said, "be judged of by their fruits." To such an appeal, an Englishman as much struck as I had been with the recent progress of things in those very districts, and with the general happiness, activity, and contentment of all classes, could only respond by echoing the sentiment of the Chancellor Oxenstiern, "Quam parvâ sapientiâ mundus gubernatur." How great must be the amount of misgovernment in the world in general, if a democracy like this can deserve to rank so high in the comparative scale!

Oct. 10.—In the stage coach, between Franconia and Plymouth, in New Hampshire, we were at first the only inside passengers; but about half way we met on the road two men and two women, respectably dressed, who might, we thought, have come from some of the sea-ports. They made a bargain with the driver to give them inside seats at a cheap rate. As we were annoyed by the freedom of their manners and conversation, I told the coachman, when we stopped to change horses, that we had a right to protection against the admission of company at half price, and, if they went on further, I must go on the outside with

my wife. He immediately apologized, and went up to the two young men and gave them their choice to take their seats behind him or be left on the road. To my surprise, they quietly accepted the former alternative. The ladies, for the first half mile, were mute, then burst out into a fit of laughter, amused at the ludicrous position of their companions on the outside, who were sitting in a pelting rain. They afterward behaved with decorum, and I mention the incident because it was the only unpleasant adventure of the kind which we experienced in the course of all our travels in the United States. In general, there is no country where a woman could, with so much comfort and security, undertake a long journey alone.

As we receded from the mountains, following the banks of the river Pemigewasset, the narrow valley widened gradually, till, first, a small, grassy, alluvial flat, and, at length, some cultivated fields, intervened between the stream and the boundary rocks of mica schist and granite. Occasionally the low river-plain was separated from the granite by a terrace of sand and gravel. Usually many boulders, with a few large detached blocks, some of them nine feet in diameter, were strewed over the granite rocks. These, as generally throughout New England, break out here and there, from beneath their covering of drift, in smooth bosses, or rounded, dome-shaped forms, called in the Alps "roches moutonnées." The contrast is very picturesque between the level and fertile plain and the region of lichen-covered rock, or sterile, quartzose sand, partially clothed with the native forest, now in its autumnal beauty, and lighted up by a bright sun. On the flat ground bordering the river, we passed many wagons laden with yellow heads of Indian corn, over which were piled many a huge pumpkin of a splendid reddish orange color. These vehicles were drawn by oxen, with long horns spreading out horizontally.

We stopped for the night in an inland village on which the maritime name of Plymouth has been bestowed. Here we spent a Sunday. There were two meeting-houses in the place, one Congregational and the other Methodist, which shared between them, in nearly equal proportions, the whole population of the

township. We went with our landlord first to one, and then, in the afternoon, to the other. Each service lasted about seventy minutes, and they were so arranged that the first began at half-past ten, and the second ended at two o'clock, for the convenience of the country people, who came in vehicles of all kinds, many of them from great distances. The reading, singing, and preaching would certainly not suffer by comparison with the average service in rural districts in churches of the Establishment in England. The discourse of the Methodist, delivered fluently without notes, and with much earnestness, kept his hearers awake; and once, when my own thoughts were wandering, they were suddenly recalled to the pulpit by the startling question—whether, if some intimate friend, whom we had lost, should return to us from the world of spirits, his message would produce more effect on our minds than did the raising of Lazarus on the Jews of old? He boldly affirmed that it would not. I began to think how small would be the sensation created by a miracle performed in the present day in Syria and many Eastern countries, especially in Persia, where they believe in the power of their own holy men occasionally to raise persons from the dead, in comparison to its effect in New England; and how readily he Jews of old believed in departures from the ordinary course of nature, by the intervention of evil spirits or the power of magic. But I presume the preacher merely meant to say, and no doubt his doctrine was true, that a voice or sign from Heaven would no more deter men from sinning, than do the clear dictates of their consciences, in spite of which they yield to temptation.

In the evening I walked on a roofed wooden bridge, resembling many in Switzerland, which here spans the Pemigewasset, and the keeper of it told me how the whole river is frozen over in winter, but the ice being broken by the falls above, does not carry away the bridge. He also related how his grandfather, who had lived to be an old man, had gone up the river with an exploring party among the Indians, and how there was a bloody battle at the forks above, where the Indians were defeated, after great slaughter on both sides.

On entering the stage coach the next morning, on our way

south, we had two inside fellow-travelers with us. One of them was a blacksmith of Boston, and the other a glover of Plymouth. After conversing on the price of agricultural implements, they fell into a keen controversy on several biblical questions. After mentioning instances of great longevity in New Hampshire, the glover raised the question, whether the antediluvian patriarchs really lived seven or eight centuries, or whether, as he supposed, we were to take these passages in a "mythical sense." "For his part, he thought we might, perhaps, interpret them to mean that the family stock, or dynasty, of a particular patriarch, endured for those long periods." He also went on to say, that the Deluge did not cover the highest mountains literally, but only figuratively. Against these latitudinarian notions the blacksmith strongly protested, declaring his faith in the literal and exact interpretation of the sacred record; but at the same time treating his antagonist as one who had a right to indulge his own opinions. As soon as there was a pause in the conversation, I asked them if they approved of a frequent change of ministers, such as I found to prevail in New England—the Methodists remaining only two years, and the Congregationalists only four or six at the utmost, in one parish. They seemed much surprised to learn from me, that in England we thought a permanent relation between the pastor and his flock to be natural and desirable. Our people, they observed, are fond of variety, and there would always be danger, when they grew tired of a preacher, of their running after others of a different sect. "Besides," said the blacksmith, "how are they to keep up with the reading of the day, and improve their minds, if they remain forever in one town? They have first their parish duties, then they are expected to write two new sermons every week, usually referring to some matters of interest of the day; but if they have a call to a new parish, they not only gain new ideas, but much leisure, for they may then preach over again their old sermons."

He then told me that he had not visited New Hampshire for ten years, and was much struck with the reform which, in that interval, the temperance movement had worked in the hotels and habits of the people. Mr. Mason, an eminent lawyer of Boston,

since dead, with whom I afterward spoke on the same subject, informed me that much stronger measures had been taken in Massachusetts, where the Legislature first passed a law, that no rum or ardent spirits should be sold without a license, and then the magistrates in many townships resolved that within their limits no licenses should be granted. "A most arbitrary proceeding," he said, "and perhaps unconstitutional; for the Federal Government levies a duty on the importation of spirits, and this is a blow struck at their revenue. But you can have no idea," he added, "how excess in drinking ruins the health in this climate. I have just been reading the life of Lord Eldon, and find that he was able, when in full work, to take with impunity a bottle of port a day, which would kill any sedentary New Englander in three years."

We left the stage when we reached the present terminus of the Boston railway at Concord, and, anxious for letters from England, went immediately to the post-office, where they told us that the post-bag had been sent by mistake to Concord in Massachusetts, the letters of that township having been forwarded to this place. Such blunders are attributable to two causes, for both of which the practical good sense of the American people will, it is hoped, soon find a cure. Synonymous appellations might be modified by additions of north and south, east and west, &c.; and the General Post-office might publish a directory, and prohibit the future multiplication of the same names in a country where not only new towns, but new states are every day starting into existence. The other evil is a political one; the practice first, I am told, carried out unscrupulously during the presidentship of General Jackson, of regarding all placemen, down to subordinate officials, such as the village post-master, as a body of electioneering agents, who must support the Federal Government. They who happen, therefore, to be of opposite opinions, must turn out as often as there is a change of ministry. On more than one occasion I have known the stage make a circuit of several miles in Massachusetts, to convey the mail to the postmaster's residence, because, forsooth, in the said village, all the houses which lay in the direct road belonging to trustworthy

men, were those of Whigs. In short, the mail, like the cabinet at Washington, had to go out of its way to hunt up a respectable democrat, and he, when found, has to learn a new craft. By leaving such places to the patronage of each state, this class of abuses would be much lessened.

Oct. 14.—Next morning we received all our letters from England, only a fortnight old, and had time to travel seventy-five miles by railway to Boston before dark. When I took out the tickets they told me we had no time to lose, saying, "Be as spry as you can," meaning "quick," "active." From the cars we saw the Merrimack at the rapids, foaming over the granite rocks; and, when I reflected on the extent of barren country all round us, and saw many spaces covered with loose, moving sands, like the dunes on the coast, I could not help admiring the enterprise and industry which has created so much wealth in this wilderness. We were told of the sudden increase of the new town of Manchester, and passed Lowell, only twenty-five years old, with its population of 25,000 inhabitants, and its twenty-four churches and religious societies. Some of the manufacturing companies here have given notice that they will employ no one who does not attend divine worship, and whose character is not strictly moral. Most of the 9000 factory girls of this place, concerning whom so much has been written, ought not to be compared to those of England, as they only remain five or six years in this occupation, and are taken in general from a higher class in society. Bishop Potter, in his work entitled "The School," tells us (p. 119) "that in the Boott factory there were about 950 young women employed for five and a half years, and that only one case was known of an illegitimate birth, and then the mother was an Irish emigrant."

I was informed by a fellow-traveler that the joint-stock companies of Lowell have a capital of more than two millions sterling invested. "Such corporations," he said, "are too aristocratic for our ideas, and can combine to keep down the price of wages." But one of the managers, in reply, assured me that the competition of rival factories is great, and the work-people pass freely from one company to another, being only required to

sign an agreement to give a fortnight's notice to quit. He also maintained that, on the contrary, they are truly democratic institutions, the shares being as low as 500 dollars, and often held by the operatives, as some of them were by his own domestic servants. By this system the work-people are prevented from looking on the master manufacturers as belonging to a distinct class, having different interests from their own. The holders of small shares have all the advantages of partners, but are not answerable for the debts of the establishment beyond their deposits. They can examine all the accounts annually, when there is a public statement of their affairs.

An English overseer told me that he and other foremen were receiving here, and in other New England mills, two dollars and two and a half dollars a day (8*s.* 6*d.* and 10*s.* 6*d.*).

CHAPTER VII.

Plymouth, Massachusetts.—Plymouth Beach.—Marine Shells.—Quicksand.—Names of Pilgrim Fathers.—Forefathers' Day.—Pilgrim Relics.—Their Authenticity considered.—Decoy Pond.—A Barn Traveling.—Excursion to Salem.—Museum.—Warrants for Execution of Witches.—Causes of the Persecution.—Conversation with Colored Abolitionists.—Comparative Capacity of White and Negro Races.—Half Breeds and Hybrid Intellects.

Oct. 15, 1845.—After spending a day in Boston, we set out by stage for Plymouth, Massachusetts, thirty-eight miles in a southwest direction, for I wished to see the spot where the Pilgrim Fathers landed, and where the first colony was founded in New England. In the suburbs of Boston we went through some fine streets called the South Cove, the houses built on piles, where I had seen a marsh only three years ago. It was a bright day, and, as we skirted the noble bay, the deep blue sea was seen enlivened with the white sails of vessels laden with granite from the quarries of Quincy, a village through which we soon afterward passed.

When we had journeyed eighteen miles into the country I was told we were in Adams-street, and afterward, when in a winding lane with trees on each side, and without a house in sight, that we were in Washington-street. But nothing could surprise me again after having been told one day in New Hampshire, when seated on a rock in the midst of the wild woods, far from any dwelling, that I was in the exact center of the town.

"God made the country, and man made the town,"

sang the poet Cowper: and I can well imagine how the village pupils must be puzzled until the meaning of this verse has been expounded to them by the schoolmaster.

On the whole, the scenery of the low granitic region bordering the Atlantic in New England preserves a uniform character over a wide space, and is without striking features; yet occasionally the landscape is most agreeable. At one time we skirted a

swamp bordered by red cedars; at another a small lake, then hills of barren sand, then a wood where the sumach and oak, with red and yellow fading leaves, were mixed with pines; then suddenly a bare rock of granite or gneiss rises up, with one side quite perpendicular, fifteen or twenty-five feet high, and covered on its summit with birch, fir, and oak.

We admired the fine avenues of drooping elms in the streets of Plymouth as we entered, and went to a small old-fashioned inn called the Pilgrim House, where I hired a carriage, in which the landlord drove us at once to see the bay and visit Plymouth beach. This singular bar of sand, three miles long, runs across part of the bay directly opposite the town, and, two miles distant from it, serving as a breakwater to the port; in spite of which the sea has been making great inroads, and might have swept away all the wharves but for this protection. As the bar was fast wasting away, the Federal Government employed engineers to erect a wooden framework, secured with piles, a mile long, which has been filled with stones, and which has caused an accumulation of sand to take place. This beach reminded me of the bar of Hurst Castle, in Hampshire; and in both cases a stream enters the bay where the beach joins the land. It is well known that the Plymouth bar was a narrow neck of land eighty years ago; and one of the inhabitants told me that when a boy he had gathered nuts, wild grapes, and plums there. Even fifty years ago some stumps of trees were still remaining, whereas nothing now can be seen but a swamp, a sea-beach, and some shoals adjoining them. Here I spent an hour with my wife collecting shells, and we found eighteen species, twelve peculiar to America, and six common to Europe; namely, *Buccinum undatum*, *Purpura lapillus*, *Mya arenaria*, *Cyprina islandica*, *Modiola papuana*, and *Mytilus edulis*, all species which have a high northern range, and which, the geologist will remark, are found fossil in the drift or glacial deposits both of North America and Europe, and have doubtless continued to inhabit both hemispheres from that era. South of Cape Cod the mollusca are so different from the assemblage inhabiting the sea north of that cape, that we may consider it as the limit of two provinces of marine testacea.

The most conspicuous shell scattered over the smooth sands was the large and ponderous *Mactra solidissima*, some specimens of which were six inches and a half in their greatest length, and much larger and heavier than any British bivalve. The broad and deep muscular impression in the interior of each valve is indicative of a great power of clasping; and I was assured by a good zoologist of Boston that this mollusk has been known to close upon the coot, or velvet duck (*Fuligula fusca*), and the blue-winged teal (*Anas discors*), when they have been feeding on them, holding these feathered enemies so fast by the beak or claw, that the tide has come up and drowned them.

After we had been some time engaged in collecting shells, we turned round and saw the horses of our vehicle sinking in a quicksand, plunging violently, and evidently in the greatest terror. For a few minutes our landlord, the driver, expected that they and the carriage and himself would have been swallowed up; but he succeeded at last in quieting them, and after they had rested for some time, though still trembling, they had strength enough to turn round, and by many plunges to get back again to a firm part of the beach.

The wind was bitterly cold, and we learned that on the evening before the sea had been frozen over near the shore; yet it was two months later when, on the 22d of December, 1620, now called Forefathers' Day, the Pilgrims, consisting of 101 souls, landed here from the Mayflower. No wonder that half of them perished from the severity of the first winter. They who escaped seem, as if in compensation, to have been rewarded with unusual longevity. We saw in the grave-yard the tombs of not a few whose ages ranged from seventy-nine to ninety-nine years. The names inscribed on their monuments are very char acteristic of Puritan times, with a somewhat grotesque mixture of other very familiar ones, as Jerusha, Sally, Adoniram, Consider, Seth, Experience, Dorcas, Polly, Eunice, Eliphalet, Mercy, &c. The New Englanders laugh at the people of the "Old Colony" for remaining in a primitive state, and are hoping that the rail-road from Boston, now nearly complete, may soon teach them to go a-head. But they who visit the town for the sake of old

associations, will not complain of the antique style of many of the buildings, and the low rooms with paneled walls, and huge wooden beams projecting from the ceilings, such as I never saw elsewhere in America. Some houses built of brick brought from Holland, notwithstanding the abundance of brick-earth in the neighborhood, were pointed out to us in Leyden-street, so called from the last town in Europe where the pilgrims sojourned after they had been driven out of their native country by religious persecution. In some private houses we were interested in many venerated heir-looms, kept as relics of the first settlers, and among others an antique chair of carved wood, which came over in the Mayflower, and still retains the marks of the staples which fixed it to the floor of the cabin. This, together with a seal of Governor Winslow, was shown me by an elderly lady, Mrs. Haywood, daughter of a Winslow and a White, and who received them from her grandmother. In a public building, called Pilgrim Hall, we saw other memorials of the same kind; as, for example, a chest or cabinet, which had belonged to Peregrine White, the first child born in the colony, and which came to him from his mother, and had been preserved to the fifth generation in the same family, when it was presented by them to the Museum. By the side of it was a pewter dish, also given by the White family. In the same collection, they have a chair brought over in the Mayflower, and the helmet of King Philip, the Indian chief, with whom the first settlers had many a desperate fight.

A huge fragment of granite, a boulder which lay sunk in the beach, has always been traditionally declared to have been the exact spot which the feet of the Pilgrims first trod when they landed here; and part of this same rock still remains on the wharf, while another portion has been removed to the center of the town, and inclosed within an iron railing, on which the names of forty-two of the Pilgrim Fathers are inscribed. They who can not sympathize warmly with the New Englanders for cherishing these precious relics, are not to be envied, and it is a praiseworthy custom to celebrate an annual festival, not only here, but in places several thousand miles distant. Often at

New Orleans, and in other remote parts of the Union, we hear of settlers from the North meeting on the 22d of December to commemorate the birth-day of New England; and when they speak fondly of their native hills and valleys, and recall their early recollections, they are drawing closer the ties which bind together a variety of independent States into one great confederation.

Colonel Perkins, of Boston, well known for his munificence, especially in founding the Asylum for the Blind, informed me, in 1846, that there was but one link wanting in the chain of personal communication between him and Peregrine White, the first white child born in Massachusetts, a few days after the Pilgrims landed. White lived to an advanced age, and was known to a man of the name of Cobb, whom Colonel Perkins visited, in 1807, with some friends who yet survive. Cobb died in 1808, the year after Colonel Perkins saw him. He was then blind; but his memory fresh for every thing which had happened in his manhood. He had served as a soldier at the taking of Louisbourg in Cape Breton, in 1745, and remembered when there were many Indians near Plymouth. The inhabitants occasionally fired a cannon near the town to frighten them, and to this cannon the Indians gave the name of "Old Speakum."

When we consider the grandeur of the results which have been realized in the interval of 225 years, since the Mayflower sailed into Plymouth harbor—how in that period a nation of twenty millions of souls has sprung into existence and peopled a vast continent, and covered it with cities, and churches, schools, colleges, and railroads, and filled its rivers and ports with steamboats and shipping—we regard the Pilgrim relics with that kind of veneration which trivial objects usually derive from high antiquity alone. For we measure time not by the number of arithmetical figures representing years or centuries, but by the importance of a long series of events, which strike the imagination. When I expressed these sentiments to a Boston friend, he asked me, "Why, then, may we not believe in the relics of the early Christians displayed at Rome, which they say the mother of Constantine brought home from the Holy Land only three cen-

turies after Christ—such, for example, as the true cross, the cradle in which the infant Jesus lay, the clothes in which he was wrapped up, and the table on which the last Supper was laid? The Puritans also believed, as do their descendants, that they were suffering in the cause of religious truth, and this feeling may have imparted additional sanctity to all memorials of their exile and adventures; yet how incomparably greater must have been the veneration felt by the early Christians for all that belonged to their divine teacher!" These observations led me to dwell on the relative authenticity of the relics in the two cases—the clearness of the historical evidence in the one, its worthlessness in the other. It has been truly said that the strength of every chain of historical testimony, like that of a chain of brass or iron, must be measured by the force of its weakest link. The earliest links in every traditional tale are usually the weakest; but in the case of the sacred objects said to have been obtained by Queen Helena, there are more links absolutely wanting, or a greater chasm of years without any records whatever, than the whole period which separates our times from those of the Pilgrim Fathers. The credulity of Helena, the notorious impostures of the monks of her age, the fact that three centuries elapsed before it was pretended that the true cross had been preserved, and another century before it was proved to be genuine by miracles, and a still further lapse of time before all doubt was set at rest by the resuscitation of a dead person—the extravagance of supposing that the Christians, when they escaped with difficulty from Jerusalem, just before the siege, should have carried with them in their flight so cumbersome a piece of furniture as the table, have all been well exposed.* But in regard to the genuineness of all the Pilgrim treasures shown me at Plymouth and elsewhere I indulged entire faith, until one day my confidence was disturbed in the Museum at Salem. A piece of furniture which came over in the Mayflower was pointed out to me, and the antiquary who was my guide remarked, that as the wood of the true cross, scattered over Christendom, has been said to be plentiful enough to build a man-of-war, so it might be doubted whether a ship of the line would

* Second Travels of an Irish Gentleman, 1833, vol. ii. p. 186.

contain all the heavy articles which freighted the Mayflower in her first voyage, although she was a vessel of only 180 tons. I immediately recollected a large heavy table, which I had seen in 1842, in the rooms of the Historical Society at Boston, which they told me had come over in the Mayflower, and my attention had been called to the marks of the staples which fixed it to the cabin floor. I accordingly returned to that Museum, and found there the sword of Elder Brewster, as well as that with which Colonel Church cut off King Philip's ear, and the gun with which that formidable Indian warrior was shot. The heavy table, too, was there, measuring two feet six inches in height, six feet in length, and five feet in breadth, and I asked Mr. Savage, the President of the Society, how they obtained it. It had certainly belonged, he said, to Governor Carver, but reasonable doubts were entertained whether it had ever been brought to New England in the Mayflower, especially in the month of December, 1620; "for you are aware," he added, "that the Mayflower made several voyages, and at each trip imported many valuables of this kind." In an instant, more than half my romance about the Pilgrim relics was dispelled. They lost half the charms with which my implicit faith had invested them, for I began to consider how many of the chairs and tables I had gazed upon with so much interest, might have been "made to order," by cabinet makers in the old country, and sent out to the new colonists. Byron has said—

"There's not a joy this world can give like that it takes away;"

and some may think the same of certain lines of historical research. I must, however, declare my firm belief that some of the articles shown me at Plymouth are true and genuine relics of the olden time—treasures which really accompanied the heroic band who first landed on the beach of Plymouth Bay, and which deserve to be handed down with reverential care to posterity.

On our way back from Plymouth to Boston, we passed near the village of East Weymouth, by a decoy pond, where eight wild geese, called Canada geese, had been shot since the morning. Swimming in the middle of a sheet of water was a tame

goose, having one leg tied by a string to a small leaden weight; and near it were a row of wooden imitations of geese, the sight of which, and the cries of the tame goose, attract the wild birds. As soon as they fly down they are shot by sportsmen of a true New England stamp, not like the Indian hunters, impatient of a sedentary life or steady labor, but industrious cobblers, each sitting all day at his own door, with his loaded gun lying by his side, his hands occupied in stitching "russet brogans" or boots for the southern negroes, to be sold at the rate of twenty cents, or tenpence a pair. After working an hour or two, he seizes his gun, and down comes a goose, which may fetch in the Boston market, in full season, two and a half dollars—the value of a dozen pair of brogans.

As we approached the capital, we met a large wooden barn drawn by twenty-four oxen. It was placed on rollers, which were continually shifted from behind forward, as fast as the barn passed over them. The removal of this large building had become necessary, because it stood directly in the way of the new railway from Boston to Plymouth, which is to be opened in a few weeks. A fellow-traveler told us of a wooden meeting-house in Hadley, which had been transferred in like manner to a more populous part of the township. "In English steeple-chases," said he, "the church itself, I believe, does not take part?"

Nov. 6.—Made an excursion to the seaport of Salem, about fourteen miles to the N.E. of Boston, a place of 17,000 inhabitants.

Dr. Wheatland, a young physician, to whom I had gone without letters of introduction, politely showed us over the Museum of Natural History, of which he was curator; and over another full of articles illustrative of the arts, manners, and customs of the East Indies, China, and Japan; for this city is a great resort of retired merchants and sea-captains. In both collections there are a variety of objects which may appear, on a hasty view, to form a heterogeneous and unmeaning jumble, but which are really curious and valuable. Such repositories ought to accompany public libraries in every large city, for they afford a kind of instruction which can not be obtained from books. To

public lectures, which are much encouraged here, and are effective means of stimulating the minds of all classes, especially the middle and lower, they furnish essential aid. Among other specimens of natural history, too large to be conveniently accommodated in any private house, I was glad of an opportunity of examining the great jaw-bones and teeth of the *Squalus serridens*, from the South Seas, which reminded me, by their serrated outline, of the teeth of the fossil *Zeuglodon*, hereafter to be mentioned. I was well pleased to observe that the shells of the neighboring coast had not been neglected, for people are often as ignorant of the natural history of the region they inhabit, especially of the lakes, rivers, and the sea, as of the flora and fauna of the antipodes. Many curious log-books of the early sea-captains of this port, who ventured in extreme ignorance of geography on distant voyages, are preserved here, and attest the daring spirit of those hardy navigators. Some of them sailed to India by the Cape, without a single chart or map, except that small one of the world, on Mercator's projection, contained in Guthrie's Geography. They used no sextants, but, working their dead-reckoning with chalk on a plank, guessed at the sun's position with their hand at noon. They had usually no capital, but started with a few beads and trinkets, and in exchange for these trifles often obtained the skins of sea-otters in the Oregon territory, each worth no less than 100 dollars. They also obtained sandal-wood in the Sandwich Islands, and bartered these and other articles in China for tea. On such slender means, and so lately as after the separation of the colonies from England, at a time when there was not a single American ship of war in the Indian or Chinese seas to protect their commerce, did many merchants of Boston and Salem lay the foundations of the princely fortunes they now enjoy.

In the course of the day we visited the court-house at Salem, where they keep the warrants issued by the judges to the high-sheriff in the years 1692 and 1693, for the execution of witches condemned to death. Here we read the depositions of witnesses, attesting such facts as that heifers and horses had died, and that cats had been taken ill, and that a man had been pierced by a knitting-needle to the depth of four inches, the wound healing

the instant the witch had been taken up. A bottle is preserved, which had been handed in to the Court at the time of the trial, full of pins, with which young women had been tormented. Some of the girls, from whose bodies these pins had been extracted, afterward confessed to a conspiracy. In the evening we walked to the place called Gallows Hill, in the suburbs of the city, where no less than nineteen persons were hanged as witches in the course of fifteen months.

It is impossible not to shudder when we reflect that these victims of a dark superstition were tried, so late as the year 1692, by intelligent men, by judges who, though they may have been less learned, are reputed to have been as upright as Sir Matthew Hale, who, in England, condemned a witch to death in 1665. The prisoners were also under the protection of a jury, and the forms of law, copied from the British courts, so favorable to the accused in capital offenses. We learn from history that an epidemic resembling epilepsy raged at the time in Massachusetts, and, being attributed to witchcraft, solemn fasts and meetings for extraordinary prayers were appointed, to implore Heaven to avert that evil, thereby consecrating and confirming the popular belief in its alleged cause. As the punishment of the guilty was thought to be a certain remedy for the disorder, the morbid imagination of the patient prompted him to suspect some individual to be the author of his sufferings, and his evidence that he had seen spectral apparitions of witches inflicting torments on him was received as conclusive. One hundred and fifty persons were in prison awaiting trial, and two hundred others had been presented to the magistrate, when the delusion was dissipated by charges being brought against the wife of the Governor Phipps, and some of the nearest relatives of Mather, an influential divine. It was then found that by far the greater number of atrocities had been prompted by fear; for during this short reign of terror the popular mind was in so disordered a state, that almost every one had to choose between being an accuser or a victim, and from this motive many afterward confessed that they had brought charges against the innocent.* The last executions for witchcraft in England

* See "Graham's History," vol. i. ch. v. p. 392.

were as late as 1716; but still later, in 1766, the Seceders in Scotland published an act of their associate Presbytery, denouncing that memorable act of the English parliament which repealed all the penal statutes against witchcraft.

The equal reverence paid by the Puritans and Scotch Seceders to the Jewish and Christian Scriptures (if, indeed, they did not hold the Old Testament in greater veneration than the New), was the chief cause of the superstition which led to these judicial murders. They had, indeed, in common with other Protestant sects, rejected the miracles ascribed to the Christian saints of the middle ages, because they were not supported by sufficient historical testimony. They had stood forward in the face of cruel persecutions courageously to vindicate the right of private judgment; and they held it to be not only the privilege, but the duty, of every Christian, layman or ecclesiastic, to exercise his reason, and not yield himself up blindly to the authority of an earthly teacher. Yet if any one dared, in 1692, to call in question the existence of the witchcraft, he was stigmatized as an infidel, and refuted by the story of the Witch of Endor evoking the ghost of the dead Samuel. Against the recurrence of such dreadful crimes as those perpetrated in the years 1602–93, society is now secured, not by judges and juries of a more conscientious character or deeper sense of religious responsibility, but by the general spread of knowledge, or that more enlightened public opinion, which can never exist in the same perfection in the minds of the initiated few, so long as the multitude with whom they must be in contact are kept in darkness.

On our return from Salem to Boston, we found the seats immediately before us in the railway car occupied by two colored men, who were laughing and talking familiarly with two negro women, apparently servant maids. The women left us at the first station, and we then entered into conversation with the men who, perceiving by our accent, that we were foreigners, were curious to know what we thought of their country. Hearing that it was our intention to winter in the south, the elder traveler "hoped we should not be tainted there." My wife, supposing he alluded to the yellow fever, said, "We shall

be there in the cool season." He replied, "I was thinking of the moral atmosphere of the southern states." His pronunciation and expression were so entirely those of a well-educated white man, that we were surprised, and, talking freely with him and his companion, learnt that the elder, who was very black, but not quite a full negro, was from Delaware, and had been educated at an "abolition college" in Ohio. The younger, who was still darker, had been a slave in Kentucky, and had run away. They were traveling to collect funds for a school for runaway negroes, near Detroit, and expressed great satisfaction that at Salem they had found "the colored and white children all taught together in the same school, this not being the case in Boston." I told them that I had just seen a white landholder from Barbadoes, who had assured me that emancipation had answered well in that island; that there was a colored man in the legislature, another in the executive council, and several in the magistracy, and that much progress had been made in the general education of the blacks. The Delawarian remarked that this was cheering news, because the recent bad success of his race in Hayti had been used as an argument by the southern planters against their natural capacity for civilization. He then descanted on the relative liberality of feeling toward colored men in the various free states, and was very severe on Indiana, Illinois, and Ohio. I expressed surprise in regard to Ohio; but the Kentuckian affirmed that the law there afforded no real equality of protection to the black man, as he could not give evidence in courts of law, but must procure a white man as a witness. There had been a scuffle, he said, lately between a man of color and a white at Dayton, and, on the white being killed, the mob had risen and pulled down the houses of all the other black people. He went on narrating stories of planters shooting their slaves, and other tales of Kentucky, the accuracy of which my subsequent visit to that state gave me good reason to question.[1] But I could not help being amused with the patriotism of this man; for, however unenviable he may have found his condition as a slave, he was still a thorough Kentuckian, and ready to maintain that in climate, soil, and every other quality, that state was immeasurably superior to the rest of the Union, especially

to Ohio, emancipation alone being wanting to demonstrate this fact to the world.

This adventure confirmed me in the opinion I had previously formed, that if the colored men had fair play, and were carefully educated, they might soon be safely intrusted with equality of civil and political rights. Whatever may be their present inferiority as a race, some of them have already shown superior abilities to a great many of the dominant whites. Whether, in the course of many generations, after the intense prejudices indulged against them have abated, they would come up to the intellectual standard of Europeans, is a question which time alone can decide. It has been affirmed by some anatomists that the brain of an *adult* negro resembles that of a white *child;* and Tiedemann, judging by the capacity of the cranium, found the brains of some of our uncivilized British ancestors not more developed than the average sized negro's brain. He says, "there is undoubtedly a very close connection between the absolute size of the brain, and the intellectual powers and functions of the mind." After a long series of observations and measurements, he refutes the idea that the brain of a negro has more resemblance to that of the orang-outang than the European brain.*

Mr. Owen, having some years ago made a post-mortem examination at St. Bartholomew's Hospital of the brain of an adult Irish laborer, found that it did not weigh more than the average brain of a youth from the educated classes of the age of fourteen; and he tells me, in a letter on this subject, that he is not aware "of any modification of form or size in the negro's brain that would support an inference that the Ethiopian race would not profit by the same influences favoring mental and moral improvement, which have tended to elevate the primitively barbarous white races of men."

The separation of the colored children in the Boston schools, before alluded to, arose, as I afterward learned, not from an indulgence in anti-negro feelings, but because they find they can in this way bring on both races faster. Up to the age of fourteen the black children advance as fast as the whites; but after

* Phil. Trans. London, 1836, p. 497.

that age, unless there be an admixture of white blood, it becomes in most instances extremely difficult to carry them forward. That the half breeds should be intermediate between the two parent stocks, and that the colored race should therefore gain in mental capacity in proportion as it approximates in physical organization to the whites, seems natural; and yet it is a wonderful fact, psychologically considered, that we should be able to trace the phenomena of hybridity even into the world of intellect and reason.

CHAPTER VIII.

Pretended Fossil Sea Serpent, or Zeuglodon, from Alabama.—Recent Appearance of a Sea Serpent in Gulf of St. Lawrence.—In Norway, in 1845.—Near Cape Ann, Massachusetts, 1817.—American Descriptions.—Conjectures as to Nature of the Animal.—Sea Snake stranded in the Orkneys proved to be a Shark.—Dr. Barclay's Memoir.—Sir Everard Home's Opinion.—Sea Serpent of Hebrides, 1808.—Reasons for concluding that Pontopiddan's Sea Snake was a basking Shark.—Capt. M'Quhae's Sea Serpent.

During the first part of my stay in Boston, October, 1845, we one day saw the walls in the principal streets covered with placards, in which the words SEA SERPENT ALIVE figured conspicuously. On approaching near enough to read the smaller type of this advertisement, I found that Mr. Koch was about to exhibit to the Bostonians the fossil skeleton of "that colossal and terrible reptile the *sea serpent*, which, *when alive*, measured thirty feet in circumference." The public were also informed that this hydrarchos, or water king, was the leviathan of the Book of Job, chapter xli. I shall have occasion in the sequel, when describing my expedition in Alabama to the exact site from whence these fossil remains were disinterred by Mr. Koch, of showing that they belong to the zeuglodon, first made out by Mr. Owen to be an extinct cetacean of truly vast dimensions, and which I ascertained to be referable geologically to the Eocene period.

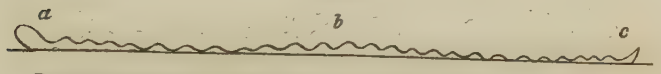
In the opinion of the best comparative anatomists, there is no reason to believe that this fossil whale bore any resemblance in form, when alive, to a snake, although the bones of the vertebral column, having been made to form a continuous series, more than 100 feet in length, by the union of vertebræ derived from more than one individual, were ingeniously arranged by Mr. Koch in a serpentine form, so as to convey the impression that motion was produced by vertical flexures of the body.

At the very time when I had every day to give an answer to

the question whether I really believed the great fossil skeleton from Alabama to be that of the sea serpent formerly seen on the coast near Boston, I received news of the reappearance of the same serpent, in a letter from my friend Mr. J. W. Dawson, of Pictou, in Nova Scotia. This geologist, with whom I explored Nova Scotia in 1842, said he was collecting evidence for me of the appearance, in the month of August, 1845, at Merigomish, in the Gulf of St. Lawrence, of a marine monster, about 100 feet long, seen by two intelligent observers, nearly aground in calm water, within 200 feet of the beach, where it remained in sight about half an hour, and then got off with difficulty. One of the witnesses went up a bank in order to look down upon it. They said it sometimes raised its head (which resembled that of a seal) partially out of the water. Along its back were a number of humps or protuberances, which, in the opinion of the observer on the beach, were true humps, while the other thought they were produced by vertical flexures of the body. Between the head and the first protuberance there was a straight part of the back of considerable length, and this part was generally above water. The color appeared black, and the skin had a rough appearance. The animal was seen to bend its body almost into a circle, and again to unbend it with rapidity. It was slender in proportion to its length. After it had disappeared in deep water, its wake was visible for some time. There were no indications of paddles seen. Some other persons who saw it compared the creature to a long string of fishing-net buoys moving rapidly about. In the course of the summer, the fishermen on the eastern shore of Prince Edward's Island, in the Gulf of St. Lawrence, had been terrified by this sea monster, and the year before, October, 1844, a similar creature swam slowly past the pier at Arisaig, near the east end of Nova Scotia, and, there being only a slight breeze at the time, was attentively observed by Mr. Barry, a millwright of Pictou, who told Mr. Dawson he was within 120 feet of it, and estimated its length at sixty feet, and the thickness of its body at three feet. It had humps on the back, which seemed too small and close together to be bends of the body.

The body appeared also to move in *long undulations*, including many of the smaller humps. In consequence of this motion the head and tail were sometimes both out of sight and sometimes both above water, as represented in the annexed outline, given from memory.

Fig. 1.



Drawing from memory of a sea serpent seen at Arisaig, Nova Scotia, Oct. 1844.

The head, *a*, was rounded and obtuse in front, and was never elevated more than a foot above the surface. The tail was pointed, appearing like half of a mackerel's tail. The color of the part seen was black.

It was suggested by Mr. Dawson that a swell in the sea might give the deceptive appearance of an undulating movement, as it is well known "that a stick held horizontally at the surface of water when there is a ripple seems to have an uneven outline." But Mr. Barry replied that he observed the animal very attentively, having read accounts of the sea serpent, and feels confident that the undulations were not those of the water.

This reappearance of the monster, commonly called the sea serpent, was not confined to the Gulf of St. Lawrence; for, two months after I left Boston, a letter from one Captain Lawson went the round of the American papers, dated February, 1846, giving a description of a marine creature seen by him from his schooner, when off the coast of Virginia, between Capes Henry and Charles—body about 100 feet long, with *pointed* projections (query, dorsal fins?) on the back; head small in proportion to its length.

Precisely in the same years, in July, 1845, and August, 1846, contemporaneous, and evidently independent accounts were collected in Norway, and published in their papers, of a marine animal, of "a rare and singular kind," seen by fishermen and others, the evidence being taken down by clergymen, surgeons, and lawyers, whose names are given, and some of whom de-

clared that they can now no longer doubt that there lives in their seas some monster, which has given rise to the tales published by Pontopiddan, Bishop of Bergen, in his Natural History of Norway (1752), who gave an engraving, which the living witnesses declare to be very like what they saw.

Fig. 2.

Pontoppidan's figure of the Norwegian sea serpent, published 1752.

These appearances were witnessed in 1845, near Christiansand, and at Molde, and in the parish of Sund, the animal entering fiords in hot weather, when the sea was calm. The length of the creature was from sixty to one hundred feet; color dark, body smooth, and in thickness, like that of a stout man; swimming swiftly with serpentine movement, both horizontally and up and down, raising its blunted head occasionally above the water; its eyes bright, but these not perceived by some witnesses; its undulating course like that of an eel; its body lay on the sea like a number of "large kegs," the water much agitated by its rapid movements, and the waves broke on the shore as when a steam-boat is passing. From the back of the head a mane like that of a horse commenced, which waved backward and forward in the water. Archdeacon Deinboll says, that "the eye-witnesses, whose testimony he collected, were not so seized with fear as to impair their powers of observation; and one of them, when within musket shot, had fired at the monster, and is certain the shots hit him in the head, after which he dived, but came up again immediately."

In reading over these recent statements, drawn up by observers on both sides of the Atlantic, it is impossible not to be struck with their numerous points of agreement, both with each other and with those recorded by the New Englanders between the years 1815 and 1825, when the sea serpent repeatedly visited the coast of North America. There is even a coincidence in

most of the contradictions of those who have attempted to describe what they saw of the color, form, and motion of the animal. At each of these periods the creature was seen by some persons who were on the shore, and who could take a leisurely survey of it, without their imaginations being disturbed by apprehensions of personal danger. On the other hand, the consternation of the fishermen in Norway, the Hebrides, and America, who have encountered this monster, is such, that we are entitled to ask the question—Is it possible they can have seen nothing more than an ordinary whale or shark, or a shoal of porpoises, or some other known cetacean or fish?

So great a sensation was created by the appearance of a huge animal, in August, 1817, and for several successive years in the harbor of Gloucester, Massachusetts, near Cape Ann, that the Linnæan Society of Boston appointed a committee to collect evidence on the subject. I am well acquainted with two of the three gentlemen, Dr. Bigelow and Mr. F. C. Gray, who drew up the report, which gives in detail the depositions of numerous witnesses who saw the creature on shore or at sea, some of them from a distance of only ten yards. "The monster," they say, "was from eighty to ninety feet long, his head usually carried about two feet above water; of a dark brown color; the body with thirty or more protuberances, compared by some to four-gallon kegs, by others to a string of buoys, and called by several persons bunches on the back; motion very rapid, faster than those of a whale, swimming a mile in three minutes, and sometimes more, leaving a wake behind him; chasing mackerel, herrings, and other fish, which were seen jumping out of the water, fifty at a time, as he approached. He only came to the surface of the sea in calm and bright weather. A skillful gunner fired at him from a boat, and, having taken good aim, felt sure he must have hit him on the head; the creature turned toward him, then dived under the boat, and reappeared a hundred yards on the other side."

Just as they were concluding their report, an unlucky accident raised a laugh at the expense of the Linnæan Committee, and enabled the incredulous to turn the whole matter into ridicule.

It happened that a common New England species of land snake (*Coluber constrictor*), full grown, and about three feet long, which must have been swept out to sea, was cast ashore, and brought to the committee. It had a series of humps on its back, caused by the individual happening to have a diseased spine—a fact which can no longer be disputed, for I have seen the identical specimen, which is still preserved in spirits in the Museum of New Haven. As many of the deponents declared this snake to be an exact miniature of the great monster, the Committee concluded that it might be its young, and, giving a figure of it, conferred upon it the high-sounding appellation of *Scoliophys Atlanticus*, the generic name being derived from the Greek σκολιὸς, scolios, flexible, and ὄφις, ophis, snake.

In addition to these published statements, Colonel Perkins, of Boston, had the kindness to lay before me his notes, made in July, 1817, when he saw the animal. He counted fourteen projections, six feet apart, on the back, which he imagined to be vertical flexures of the body when in motion; but he also saw the body bent horizontally into the figure of the letter S. It was of a chocolate brown color, the head flat, and about a foot across. A friend of his took a pencil sketch of it, which was found to resemble Pontoppidan's figure.* Respecting the length, Mr. Mansfield, a friend of the Colonel, was driving a one-horse vehicle on a road skirting Gloucester Bay, along the edge of a cliff, fifty or sixty feet in perpendicular height, when he saw the sea-serpent at the base of the cliff on the white beach, where there was not more than six or seven feet water, and, giving the reins to his wife, looked down upon the creature, and made up his mind that it was ninety feet long. He then took his wife to the spot, and asked her to guess its length, and she said it was as long as the wharf behind their house, and this measured about 100 feet. While they were looking down on it, the creature appeared to be alarmed, and started off. I asked another Bostonian, Mr. Cabot, who saw the monster in 1818, whether it might not have been a shoal of porpoises following each other in a line, at the distance of one or two yards, and tumbling over so

* See "Silliman's Journal," vol. ii. p. 156.

as to resemble a string of floating barrels in motion. He said that after this explanation had been suggested to him, he was one of thirty persons who ran along the beach at Nahant, near Boston, when the sea serpent was swimming very near the shore. They were all convinced that it was one animal, and they saw it raise its head out of the water. He added that there were at that time two sea serpents fishing in the Bay at once.

Among many American narratives of this phenomenon which have been communicated to me, I shall select one given me by my friend Mr. William M·Ilvaine of Philadelphia, because it seems to attest the fact of the creature having wandered as far south as Cape Hatteras, in North Carolina, lat. 35°. "Captain Johnson, of New Jersey, was sailing, in the year 1806, from the West Indies, on the inner edge of the gulf stream, in a deeply laden brig, when they were becalmed, and the crew and passengers awe-struck by the sudden apparition of a creature having a cylindrical body of great length, and which lifted up its head eight feet above the water. After gazing at them for several minutes it retreated, making large undulations like a snake." The story had been so much discredited that the captain would only relate it to intimate friends.

After the year 1817, every marvelous tale was called in the United States a snake story; and when Colonel Perkins went to Washington twenty years ago, and was asked if he had ever known a person who had seen the sea serpent, he answered that he was one of the unfortunate individuals who saw it himself. I confess that when I left America in 1846, I was in a still more unfortunate predicament, for I believed in the sea serpent without having seen it. Not that I ever imagined the northern seas to be now inhabited by a gigantic ophidian, for this hypothesis has always seemed to me in the highest degree improbable, seeing that, in the present state of the globe, there is no great development of reptile life in temperate or polar regions, whether in the northern or southern hemisphere. When we enter high latitudes, such as those in which the creature called a sea serpent most frequently occurs, we find even the smaller reptilians, such as frogs and newts, to grow rare or disappear; and there are no

representatives of the hydrophis or true water-snake, nor of tortoises, nor of the batrachian or lizard tribes.

In like manner, in the geological periods, immediately antecedent to that when the present molluscous fauna came into existence, there was a similar absence of large reptiles, although there were then, as now, in colder latitudes, many huge sharks, seals, narwals, and whales. If, however, the creature observed in North America and Norway, should really prove to be some unknown species of any one of these last-mentioned families of vertebrata, I see no impropriety in its retaining the English name of sea serpent, just as one of the seals is now called a sea elephant, and a small fish of the Mediterranean, a sea horse; while other marine animals are named sea mice and urchins, although they have only a fanciful resemblance to hedgehogs or mice.

Some naturalists have argued that, if it were an undescribed species, some of its bones must, ere this, have been washed ashore; but I question whether we are as yet so well acquainted with all the tenants of the great deep as to entitle us to attach much weight to this argument from negative evidence; and I learn from good zoologists that there are whales so rare as never to have been seen since Sibbald described them in the middle of the seventeenth century. There is also a great cetacean, about thirty feet long, called *Delphinorhyncus micropterus*, of which only three specimens have ever been met with. One of these was thrown ashore forty years ago on the coast of Scotland, and the other two stranded on the shores of Belgium and France, and identified with the British species by Dr. Melville.

The doubts, however, which since my return from the United States, I have been led to entertain respecting the distinct and independent existence of the sea serpent, arise from a strong suspicion that it is a known species of sea animal which has actually been cast ashore in the Orkneys, and that some of its bones are now preserved in our museums, showing it to be of the squaline family, and no stranger to some of the zoologists whom it has perplexed, nor to many of the seafaring people whom it has frightened. In the summer of the year 1808, the fishermen

of the Hebrides were terrified by a monster of huge size and unusual appearance, which created a great sensation in Scotland. Three or four months after this apparition, the body of an enormous sea monster was washed ashore (Sept. 1808) on the outer reefs at Rothesholm Head in Stronsa, one of the Orkneys, where it was first observed while still entire, and its length measured by two persons; after which, when somewhat decayed, it was swept in by another storm, and stranded on the beach, and there examined by others. Mr. Neill, well known as a naturalist, who had been on a visit to Stronsa the same year, but had left before this occurrence, immediately corresponded with friends on the spot, among others with Mr. Laing, the historian, and with a lawyer and physician, who collected evidence for him. Their affidavits, taken in 1808, respecting the monster, were published in the Transactions of the Wernerian Society, of which Mr. Neill was secretary, and were accompanied by a drawing of the skeleton, obviously ideal and very incorrect, with six legs and a long tail curving several times vertically. The man who sketched it reached the spot too late, and when scarcely any part of the animal remained entire, and the outline is admitted to have been taken by him and altered from a figure chalked out upon a table by another man who had seen it, while one witness denied its resemblance to what he had seen. But a carpenter, whose veracity, I am informed by Mr. Neill (in a letter dated 1848), may be trusted, had measured the carcass, when still whole, with his foot-rule, and found it to be fifty-five long, while a person who also measured it when entire, said it was nine fathoms long. The bristles of the mane, each fourteen inches in length, and described as having been luminous in the dark, were no doubt portions of a dorsal fin in a state of decomposition. One said that this mane extended from the shoulders to within two feet and a half of the tail, another that it reached to the tail: a variance which may entitle us to call in question the alleged continuity of the mane down the whole back. So strong was the propensity in Scotland to believe that the Stronsa animal was the sea serpent of the Norwegians, that Mr. Neill himself, after drawing up for the Wernerian Society his description of it from the

different accounts communicated to him, called it *Halsydrus Pontoppidani*.

Parts of the cranium, scapular arch, fin, and vertebral column were sent to Dr. Barclay of Edinburgh, who had at that time the finest museum of comparative anatomy north of the Tweed, and he conceived them to belong to a new and entirely unknown monster.

If the imagination of good zoologists could be so preoccupied as to cause them at once to jump to the conclusion that the Stronsa animal and the Norwegian sea serpent were one and the same, we can not be surprised that the public in general placed the most implicit faith in that idea. That they did so, is proved by a passage recently published in Beattie's Life of Campbell, where the poet writes thus, in a letter dated February 13th, 1809 :—

"Of real life let me see what I have heard for the last fortnight : first, a snake—my friend Telford received a drawing of it —has been found thrown on the Orkney Isles ; a sea snake with a mane like a horse, four feet thick, and fifty-five feet long. This is seriously true. Malcolm Laing, the historian, saw it, and sent a drawing of it to my friend."*

Now here we see the great inaccuracy of what may be styled contemporaneous testimony of a highly educated man, who had no motive or disposition to misrepresent facts. From the Wernerian Transactions and Mr. Neill's letter, I learn distinctly that Malcolm Laing never went to the shore of Stronsa to see the monster.

Fortunately, several of the vertebræ were forwarded, in 1809, to Sir Everard Home, in London, who at once pronounced them to belong to the *Squalus maximus*, or common basking shark. Figures of other portions sent to Edinburgh to Dr. Barclay, were also published by him in the Wernerian Transactions, and agree very well with Home's decision, although it is clear, from Barclay's Memoir, that he was very angry with the English anatomist for setting him right, and declaring it to be a shark. It was indeed very difficult to believe on any but the most con-

* Campbell's Life, vol. ii. p. 169, 170.

vincing evidence that a carcass which was fifty-five feet long could be referable to a species, the largest known individual of which has never exceeded thirty-five or forty feet. But there seems no escape from Home's verdict; for the vertebræ are still in the College of Surgeons, where I have seen them, quite entire, and so identical with those of the *Squalus maximus*, that Mr. Owen is unwilling to imagine they can belong to any other species of the same genus.

Mr. Neill tells me, in his letter, that the basking shark is by no means uncommon in the Orkneys, where it is called the hockmar, and a large one was killed in Stromness Harbor in 1804, when he was there; yet it was agreed by all with whom he spoke in 1808, that the Stronsa animal was double the length of the largest hockmar ever stranded in their times in Orkney.

Unfortunately, no one observed the habits and motions of the monster before it was cast ashore; but the Rev. Donald Maclean, of Small Isles in the Hebrides, was requested to draw up a statement of what he recollected of the creature which had so much alarmed the fishermen in the summer of the same year. Before he penned his letter, which was printed as an appendix to Barclay's Memoir in 1809,* he had clearly been questioned by persons who were under the full persuasion that what he had seen, and the Stronsa animal, were identical with Pontoppidan's sea serpent. Maclean informs us, that it was about the month of June, 1808, when the huge creature in question, which looked at a distance like a small rock in the sea, gave chase to his boat, and he saw it first from the boat, and afterward from the land.

Its head was broad, of a form somewhat oval; its neck rather smaller. It moved by undulations up and down. When the head was above water, its motion was not so quick; when most elevated, it appeared to take a view of distant objects It directed its "monstrous head," which still continued above water, toward the boat, and then plunged violently under water in pursuit of them. Afterward, when he saw it from the shore, "it moved off with its head above water for about half a mile

* Wern. Trans. vol. i. p. 444.

before he lost sight of it. Its length he believed to be from seventy to eighty feet." "About the same time the crews of thirteen fishing boats, off the island of Canna, were terrified by this monster; and the crew of one boat saw it coming toward them, between Rum and Canna, with its head high above water."*

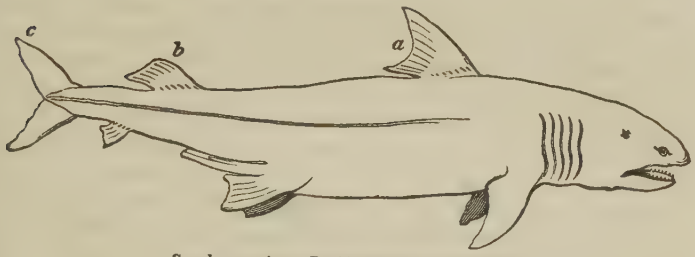
Mr. Maclean adds, evidently in answer to a question put by his correspondent, that he saw nothing of the mane; and adds, "when nearest to me it did not raise its head wholly above water, so that the neck being under water, I could perceive no shining filaments thereon, if it had any." And he also observes: "It had no fin that I could perceive, and seemed to me to move progressively by undulations up and down." Most of my readers are probably satisfied by this time, that if nothing had come down to us but oral testimony, or even published accounts without figures respecting the creature seen in the Hebrides in 1808, as well as that afterward stranded in Orkney, we should all of us have felt sure that both of them were one and the same monster, and no other than the sea snake of Pontoppidan, or that so often seen on the eastern coast of North America. How much delusion in this case has been dispelled by the preservation of a few bones! May we not then presume that other sea serpents were also sharks? If so, how are we to reconcile recorded appearances with this hypothesis? It was justly remarked by Dr. Fleming, in his British Animals, 1828 (p. 174), that Maclean's account of a creature, which raised its head above the water and viewed distant objects, was opposed to the idea of its being referable to the class of cartilaginous fishes, for no shark lifts its head out of the sea as it swims. I may also remark, that the descriptions commonly given, both by the Norwegians and North Americans, would agree better with the appearance of a large seal with a mane, chased by a shoal of porpoises, than with a shark.

But when we question the evidence more closely, we must make great allowance for the incompetence of observers wholly ignorant of zoology. In the first place, we must dismiss from our minds the image of a shark as it appears when out of the

* Wern. Trans. Edinburgh, vol. i. p. 444.

water, or as stuffed in a museum. The annexed figure represents the outline of the *Squalus maximus*, of which when immersed, but swimming near the surface, three points only could be seen above water at the same time, namely, the prominence of the back, with the first dorsal fin, *a*; secondly, the second dorsal fin, *b*; and thirdly, the upper lobe of the tail, *c*.

Fig. 3.



Squalus maximus, Basking Shark, or Hockmar.
a. First dorsal fin; *b*. Second dorsal fin; *c*. Caudal fin.

Dr. Melville informed me that he once saw a large species of shark, swimming at the rate of ten miles an hour, in Torres Strait, off Australia; and, besides the lateral flexures of the tail, which are the principal propelling power, the creature described as it advanced a series of vertical undulations, not by the actual bending of the body itself, but by the whole animal first rising near to the surface and then dipping down again, so that the dorsal fin and part of the back were occasionally lifted up to a considerable height. Now it strikes me, that if a very huge shark was going at the rate of twenty miles an hour, as stated by some of the observers, that portion of the back which emerged in front might easily be taken for the head, and the dorsal fin behind it for the mane; and in this manner we may explain the three projecting points, *a*, *b*, *c*, fig. 1, p. 109, given in the drawing, sketched from memory, by Mr. Barry of Nova Scotia. The smaller undulations seen by the same person, intervening between the three larger, may very well be referred to a series of waves raised in the water by a rapid passage through it of so bulky a body. Indeed, some of the drawings which I have seen

of the northern sea snake, agree perfectly with the idea of the projecting back of a shark followed by a succession of waves, diminishing in size as they recede from the dorsal prominence.

The parts before mentioned as alone visible above water would form so small a portion of the whole body, that they might easily convey the notion of narrowness as compared to great length; and the assertion of a few witnesses that the dorsal projections were pointed, may have arisen from their having taken a more accurate look at the shape of the fins, and distinguished them better from the intervening waves of the sea. But, according to this view, the large eyes seen in the "blunt head" by several observers, must have been imaginary, unless in cases where they may have really been looking at a seal. It can hardly be doubted that some good marksmen, both in Norway and New England, who fired at the animal, sent bullets into what they took to be the head, and the fact that the wound seems never to have produced serious injury, although in one case blood flowed freely, accords perfectly with the hypothesis that they were firing at the dorsal prominence, and not at the head of a shark. The opinion of most of the observers that the undulations were coincident with the rapid movements of the creature, agrees well with our theory, which refers the greater number of the projections to waves of the sea. On the other hand, as several of the protuberances are real, consisting of three fins and a part of the back, the emergence of these parts may explain what other witnesses beheld. Dr. Melville has suggested to me, that if the speed were as great as stated, and the progressive movement such as he has described,* the three fins would be first submerged, and then re-emerge in such rapid succession, that the image of one set would be retained on the retina of the eye after another set had become visible, and they might be counted over and over again, and multiplied indefinitely. Although I think this explanation unnecessary in most cases, such a confusion of the images seems very possible, when we recollect that the fins would be always mingled with waves of the sea, which are said, in the Norwegian accounts of 1845, to have been so great, that they broke on the coast in

* Ante, p. 119.

calm weather, when the serpent swam by, as if a steamer at full speed was passing near the shore.

I conclude, therefore, that the sea serpent of North America and the German Ocean is a shark, probably the *Squalus maximus*, a species which seems, from the measurements taken in Orkney in 1808, to attain sometimes, when old, a much larger size than had ever been previously imagined. It may be objected that this opinion is directly opposed to a great body of evidence which has been accumulating for nearly a century, derived partly from experienced sea-faring men, and partly from observers on the land, some of whom were of the educated class. I answer that most of them caught glimpses only of the creature when in rapid motion and in its own element, four-fifths or more of the body being submerged; and when, at length, the whole carcass of a monster mistaken for a sea snake was stranded, touched, and measured, and parts of it sent to the ablest anatomists and zoologists in Scotland, we narrowly escaped having transmitted to us, without power of refutation, a tale as marvelous and fabulous concerning its form and nature, as was ever charged against Pontoppidan by the most skeptical of his critics.*

* After the above was written, a letter appeared in the English newspapers, by Captain M'Quhae, R.N., of the Dædalus frigate, dated Oct. 7, 1848, giving an account of "the sea serpent" seen by him, Aug. 6, 1848, lat. 24° 44′ S. between the Cape and St. Helena, about 300 miles distant from the western coast of Africa; the length estimated at sixty feet, head held four feet above water, with something like the mane of a horse on its back which was straight and inflexible. Professor Owen has declared his opinion, after seeing the drawing of the animal, sent to the Admiralty by Captain M'Quhae, "that it may have been the largest of the seal tribe, the sea-elephant of the southern whalers, *Phoca proboscidea*, which sometimes attains a length of thirty feet, and individuals of which have been known to have been floated by icebergs toward the Cape. This species has coarse hair on the upper part of its inflexible trunk which might appear like a mane. The chief impelling force would be the deeply immersed terminal fins and tail, which would create a long eddy, readily mistakable for an indefinite prolongation of the body."

Mr. Owen's conjecture appears to me very probable; but, before I heard it, I had made up my mind that the creature seen by Captain M'Quhae differed from the sea serpent of the Norwegians and New Englanders, from whose description it varies materially, especially in the absence, when at full speed, of apparent undulations, or dorsal prominences.

CHAPTER IX

Boston.—No Private Lodgings.—Boarding-houses.—Hotels.—Effects of the Climate on Health.—Large Fortunes.—Style of Living.—Servants.—Carriages.—Education of Ladies.—Marriages.—Professional Incomes.—Protectionist Doctrines.—Peculiarities of Language.—Literary Tastes.—Cost of Living.—Alarms of Fire.

As we intended to pass nearly two months in Boston, we determined to look out for private lodgings, such as might be met with in every large town in England, but which we found it almost impossible to procure here. It does not answer to keep houses, or even suites of apartments to let in a city where house-rent is so dear, and well-trained servants so difficult to hire, even at high wages. In this country, moreover, the mass of the people seem to set less value on the privilege of living in private than we English do. Not only strangers and bachelors, but whole families, reside in boarding-houses, usually kept by a widow who has known better days, and is a good manager, and can teach and discipline servants.

During a former tour, we had found it irksome to submit to the rules of a boarding-house for any length of time; to take every meal at a public table, where you are expected to play the agreeable to companions often uncongenial, and brought together on no principle of selection; to join them in the drawing-room a short time before dinner; to call on them in their rooms, and to listen to gossip and complaints about the petty quarrels which so often arise among fellow-boarders, as in a ship during a long voyage. The only alternative is to get private rooms in an hotel, which I at length succeeded in procuring at the Tremont House, after I had failed in negotiating a treaty with several landlords to whom I had been recommended. One of these, after showing me his apartments, and stating his terms, ended by saying, "Ours is a temperance house—prayers orthodox." I presume that my countenance betrayed the amusement which this last piece of in-

telligence afforded me, for he instantly added, in an under tone, "But if you and your lady should not attend prayers, it will not be noticed."

A Bostonian, who had returned from a tour in England and Ireland, much struck with the poverty of the lower classes, and with the difficulties experienced by those who are struggling to rise in the world, remarked to me, "We ought to *be* happier than the English, although we do not *look* so." There is, in fact, a care-worn expression in the countenances of the New Englanders, which arises partly from their striving and anxious disposition, and their habits of hard work, mental and bodily, and partly from the effects of the climate.

One of their lawyers expressed to me his regret that the members of his profession, and their most eminent politicians, physicians, and literary men, would not spare themselves, and give up some time to relaxation. "They seem determined," he said, "to realize the sentiment so finely expressed by Milton—

'To scorn delights, and live laborious days.'

Our ancestors had to work fifteen hours out of every twenty-four, in order not to starve in the wilderness; but we persist in straining every nerve when that necessity has ceased." He then reminded me how much more cheerful, plump, and merry the young negro children looked in the South, than those of New England, who had all the appearance of having been forced in their education, and over-crammed at school.

I suspect, however, that the principal cause of the different aspect of the Anglo-Saxon race in England and America is the climate. During both our tours through the United States, my wife and I enjoyed excellent health, and were delighted with the clearness of the atmosphere, the bright sun, and the great number of cloudless days; but we were told that, if we staid a second year, we should feel less vigorous. Many who have been born in America, of families settled there for several generations, find their health improved by a visit to England, just as if they had returned to their native air; and it may require several centuries before a race becomes thoroughly acclimatized.

The great difference of the species of indigenous animals and plants in North America, those of the middle and southern states being almost all distinct from the European, points to a wide diversity of climate, the atmosphere being drier, and there being a much greater annual range of the thermometer than in corresponding latitudes on the eastern side of the Atlantic. Even so cosmopolite a being as man may demand more than two centuries and a quarter before he can entirely accommodate his constitution to such altered circumstances, and before the successive generations of parents can acquire themselves, and transmit to their offspring, the new and requisite physiological peculiarities.

English travelers often ascribe the more delicate health of the inhabitants here to their in-door habits and want of exercise. But it is natural that they should shrink from exposing themselves to the severe frosts and long-continued snows of winter, and to the intense heat of the summer's sun. An Englishman is usually recognized at once in a party, by a more robust look, and greater clearness and ruddiness of complexion; and it is surprising how distinguishable he is even from persons born of English parents in the United States. It is also a curious fact, which seems generally admitted, that the native Anglo-Australians bear a considerable resemblance to the Anglo-Americans in look and manner of speaking, which is a mystery, for there is certainly in that case no analogy between the climates of the two countries.

The number of persons in Boston who have earned in business, or have inherited large fortunes, is very great. The Common, a small park, which is by no means the only quarter frequented by rich citizens, is surrounded by houses which might form two fine squares in London, and the average value of which, in the market, might bear a comparison with those in very fashionable parts of our metropolis—sums of from 4000*l.* to 20,000*l.* sterling having been paid for them. The greater part of these buildings are the property of the persons who reside in them; and they are fitted up very elegantly, and often expensively. Entertainments in a sumptuous style are not rare; but the small number of servants in comparison with those kept in England by

persons of corresponding income, and the want of an equipage, impart to their mode of life an appearance of simplicity which is perhaps more the result of necessity than of deference to a republican theory of equality. For to keep servants here for mere show, would not only be thought absurd, but would be a great sacrifice of comfort. To obtain a few efficient ones at any price, and to put up with many inconveniences rather than part with them—allowing them to continue in service after marriage, is the practice of not a few of the richest people, who often keep no more than four domestics where there would be at least nine in London. In consequence of this state of things, the ladies are more independent of being waited on than those of similar fortune in England; but we are sometimes amused when we hear them express envy of the superior advantages enjoyed in Europe, for they are under the delusion of supposing that large establishments give no trouble in "the old country." There are, indeed, crowds of poor emigrants here, especially from Ireland, eager for employment; but for the most part so coarse, ignorant, and dirty in their habits, that they can not gain admittance into genteel houses. No mistress here ventures to interfere with the dress of a servant maid, and girls wait at table with braided hair, which is certainly more becoming to them when young, and are never required to conceal with a cap their neatly arranged locks, according to the costume approved of by English disciplinarians. When raising the dust at their work, in sweeping the floors, they cover the head with a handkerchief. The New England servants are generally provident, for, besides the intelligence they derive from their early school education, they have a reasonable hope of bettering their condition, are well paid, and not kept down in the world by a number of poor relations.

Many of the wealthiest families keep no carriage, for, as I before said, no one affects to live in style, and the trouble of engaging a good coachman and groom would be considerable, and also because the distances in Boston are small, and the facilities of traveling by railway into the country in all directions very great. But there are many livery stables, where excellent carriages and horses are to be hired with well-dressed drivers.

Some of their vehicles are fitted up with India-rubber tubes, to enable those inside to communicate with the coachman without letting down the glass, which, during a severe New England frost, or a snow storm, must be no unmeaning luxury.

They who can not afford to live in the metropolis, reside with their families at places often twenty-five miles distant, such as Ipswich, and go into their shops and counting-houses every morning, paying 100 dollars (or twenty guineas), for an annual ticket on the railway, and being less than an hour at a time on the road.

The usual hours of breakfasting and dining here are much earlier than in London; yet evening parties in the most fashionable society do not begin till nine, and often ten o'clock, which appears a senseless imitation of foreign manners, and calculated, if not intended, to draw a line between those who can afford to turn night into day, and those who can not.

In some houses the gentlemen go up after dinner with the ladies, as in France, to the drawing-room; but it is more common, as in England, to stay a while and talk together. There is very little drinking, and I scarcely ever heard any conversation in which the women might not have joined with propriety. Bachelor dinners are more frequent than in the highest circles in London; but there is beginning to be a change in this respect, and certainly the ladies are well able to play their part, for no care or expense is spared to give them, not only every female accomplishment, but a solid education. The incomes made by some men of superior scholarship and general knowledge, who devote themselves entirely to the teaching of young ladies, and, still more, the station held by these teachers in society, is a characteristic of Boston highly deserving of praise and imitation.

The influence of cultivated women in elevating and refining the tone of society and the national mind, may nowhere be rendered more effective than where a large proportion of the men are engaged in mercantile business, and belong to a class who have too truly been said "to live in counting-houses that they may sleep in palaces." Their wives and daughters have leisure to acquire literary and scientific tastes, and to improve their

understandings, while the fathers, husbands, and brothers are summing up accounts, attending to the minute details of business, or driving bargains.

The impress of the strict morals of the Puritan founders of the New England commonwealths on the manners of their descendants, is still very marked. Swearing is seldom heard, and dueling has been successfully discountenanced, although they are in constant communication with the southern states, where both these practices are common, though much less so than formerly.

The facility of getting on in the world, and marrying young, is, upon the whole, most favorable to the morals of the community, although it sometimes leads to uncongenial and unhappy unions. But, as a set-off to this evil, it should be stated, that nowhere is there so much free choice in forming matrimonial connections without regard to equality of fortune. It is unavoidable that the aristocracy of taste, manners, and education should create barriers, which can not be set at naught without violence to the feelings ; but we had good opportunities of knowing that parents would be thought far more unreasonable here than in England, and in some other states of the Union, if they discouraged alliances on the mere ground of one of the parties being without fortune.

The most eminent medical men in Boston make, I am told, about 9500 dollars (2000*l.*) a year, and their early career is one of hard striving and small profits. The incomes made by the first lawyers are much more considerable, and I hear that, when a leading practitioner was invited to transfer his business from Boston to New York, because he might be employed there by a population of 400,000 souls, he declined, saying, that his clients were drawn from a population nearly equal in numbers and average wealth, although not a fourth part of them were resident in the city of Boston.

Bankruptcies are rarer than in any other mercantile community in the Union of equal extent, and, when they do occur, larger dividends are paid to the creditor. As most of the rich private citizens live within their income, so the State is frugal, and although its credit stands so high that it could borrow largely, it

has contracted very little debt, it being thought advisable to leave the execution of almost every kind of public work to private enterprise and capital.

In many of the southern and western states, the commercial policy of Massachusetts was represented to me as eminently selfish, the great capitalists wishing to monopolize the manufacturing trade, and by a high tariff to exclude foreign capitalists, so as to grow rich at the expense of other parts of the Union. In conversing with the New Englanders, I became satisfied that, in spite of the writings of the first political economists in Europe and America, and the opinion of Channing, and some other of their own distinguished men (not excepting Daniel Webster himself in the early part of his career), they have persuaded themselves that the doctrines of free trade are not applicable to the present state of their country. The facility with which every people conscientiously accommodate their speculative opinions to their local and individual interests, is sufficiently demonstrated by the fact, that each of the other states, and sections of states, as they successively embark in the manufacture, whether of cotton, iron, or other articles, become immediately converts to protectionist views, against which they had previously declaimed.

There is a general feeling of self-respect pervading all classes in the New England states, which enables those who rise in the world, whether in political life, or by suddenly making large fortunes in trade, if they have true gentility of feeling, to take their place in good society easily and naturally. Their power of accommodating themselves to their new position is greatly facilitated by the instruction imparted in the free schools to all, however humble in station, so that they are rarely in danger of betraying their low origin by ungrammatical phrases and faulty pronunciation.

English critics are in the habit of making no allowance for the slightest variations in language, pronunciation, or manners, in any people descended from the Anglican stock. In the Germans or French they may think a deviation from the British standard odd or ridiculous, but in an American they set it down at once as vulgar; whereas it may be one of those conventional-

isms, respecting which every nation has a right to enforce its own arbitrary rules. The frequent use of the words, "sir" and "ma'am," in the United States, like "oui, monsieur, oui, madame," in France, for the sake of softening the bald and abrupt "yes" or "no," would sound to a Frenchman or Italian more polite; and if the Americans were to conform to the present English model in such trifles, it might happen that in England itself the fashion may soon change. There are also many genuine old classical phrases, which have grown obsolete in the parent country, and which the Americans retain, and ought not to allow themselves to be laughed out of. The title of Madam is sometimes given here, and generally in Charleston (S. Carolina), and in the South, to a mother whose son has married, and the daughter-in-law is then called Mrs. By this means they avoid the inelegant phraseology of old Mrs. A., or the Scotch, Mrs. A. senior. Madam, in short, very commonly serves as the equivalent of dowager, as used in English titled families. There are also some antique provincialisms handed down from the times of the first settlers, which may well deserve to be kept up, although they may be subjects of diversion to English tourists. In one of Shirley's plays, written just before the middle of the seventeenth century, when the largest emigration took place from Old to New England, we find the term, "I guess," for "I think," or "I suppose," occurring frequently; and if we look farther back, it is met with in the "Miller's Tale" and in the "Monk" of Chaucer:—

> . . . "For little heaviness
> Is right enough for muchel folk, I guess."

And in Spenser's "Faerie Queene"—

> "It seemed a second Paradise, I guesse."*

Among the most common singularities of expression are the following:—"I should admire to see him" for "I should like to see him;" "I want to know," and "Do tell," both exclamations of surprise, answering to our "Dear me." These last, however, are rarely heard in society above the middling class. Occa-

* Canto x. 23.

sionally I was as much puzzled as if I was reading Tam o'Shanter, as, for example, "out of kittel" means "out of order." The word "sick" is used in New England in the same sense as it was in the time of Shakspeare, or when the liturgy of the Church of England was composed. The word "ill," which in Great Britain means "not well," signifies in America "very ill." They often speak here of a "lovely man," using the adjective in a moral sense; and say of a plain, shriveled old woman, that she is "a fine and lovely woman," meaning that her character and disposition are amiable. "Clever" is applied to a good-natured and good-hearted person who is without talent and quickness. At first we had many a good laugh when we discovered that we had been at cross purposes, on comparing notes as to our opinions of English and American friends. On one occasion I admitted that Mrs. A. might be "a fine and lovely woman," but it could only be said of her by candlelight.

In the literary circles here we meet with several writers who are keeping up an active correspondence with distinguished men in all parts of Europe, but especially with English authors.

We are often amused to observe how much the conversation turns on what is going on in London. One day I was asked whether it were true that the committee for deciding on the statues to be set up in the new House of Lords, had voted in favor of Richardson, before they could make up their minds whether they should honor Pope, Dryden, Swift, and Fielding; and whether Milton was at first black-balled, and how they could possibly be disputing about the rival claims of Hume and Robertson as historians, while a greater than either of them, Gibbon, was left out of the question. They suggested that a tribunal of literary Jews might soon be required to pronounce fairly on the merits of Christian writers. "Do your countrymen," said one of my friends to me, "mean to imitate the spirit of the king of Bavaria, who excluded Luther from his Walhalla because he was a Protestant, and instead of Shakspeare and Newton could endure no representatives of British genius, save the orthodox King Alfred and Roger Bacon?" I was curious, when I got home, to learn how much of this gossip about things in the old

country was founded on correct information, and was relieved to find that the six poets ultimately selected were Chaucer, Spenser, Shakspeare, Milton, Dryden, and Pope; a result which, considering that a single black ball excluded, did credit to the umpires, and would, I am sure, be approved of by a literary jury in Massachusetts. I was also glad to learn that in Bavaria, as soon as political parties changed, a royal order was issued to admit the bust of Luther into the Walhalla.

The Americans, in general, have more self-possession and self-confidence than Englishmen, although this characteristic belongs perhaps less to the Bostonians than to the citizens of most of the other parts of the Union. On the other hand, the members of the great republic are sensitive and touchy about their country, a point on which the English are imperturbably indifferent, being proud of every thing British, even to a fault, since contempt for the opinion of other nations may be carried so far as to diminish the prospect of national improvement. It might be better if each of the great branches of the Anglo-Saxon family would borrow something from the qualities of the other,—if John Bull had less *mauvais honte*, so as to care less for what others were thinking of himself individually, and if Jonathan cared less for what others are thinking of his country.

The expense of living in the northern states is, upon the whole, decidedly more reasonable than in England, although the dress, both of men and women, is somewhat dearer. In Boston, also, the rent of houses is very high, but not so in the country. Traveling is much cheaper, and so are food, newspapers, and books. On comparing the average price of bread during the present year with that in England, we find that it is about twenty-five per cent. cheaper, beef and mutton ten per cent. cheaper, and the price of poultry extremely moderate. Why, in so old a city as Boston, the supply of seamstresses, milliners, and dressmakers, should be as inadequate to the demand as in some of our newly-founded colonies when most progressive, I leave to political economists to explain. My wife was desirous of having a dress and bonnet made up in a week, but one milliner after another declined to undertake the task. It would be a useful lesson to

those who are accustomed to consider themselves as patrons whenever they engage others to do work for them, to learn how in reality, if things are in a healthy state, the obligation is mutual; but to discover that the usual relations of the employer and employed are entirely reversed, and that the favor is by no means conferred by the purchaser, would try the patience of most travelers. Friends interceded, but in vain; till, at last, a representation was made to one of these important personages, that my wife was about to leave the city on a fixed day, and that being a foreigner she ought, out of courtesy, to be assisted; an appeal which was successful, and the work was then undertaken and sent home with strict punctuality, neatly made, and every spare scrap of the material honestly returned, the charge being about equal to that of the first London dressmakers.

We remarked in some of the country towns of Massachusetts, where the income of the family was very moderate, that the young ladies indulged in extravagant dressing—40*l.*, for example, being paid for a shawl in one instance. Some of the richer class, who had returned from passing a year or two in Germany and England, had been much struck with the economical habits, in dress and in the luxuries of the table, of persons in easy circumstances there, and the example had not been lost on them.

Oct. 28.—Night after night the church bells have been tolling the alarm of fire, followed by the rattling of the heavy engines under the windows of our hotel. When I last resided here (1842), I was told that half of these conflagrations were caused by incendiaries, partly by boys for the mere love of mischief; but no suspicions of this kind are now entertained. Most of the buildings are of wood, and it is hoped that the increasing use of brick in the private, and of granite in the public, buildings will lessen the evil. The combustibility of the wood of the white or Weymouth pine (*Pinus strobus*), largely employed in houses here, is said to exceed that of other kinds of timber.

CHAPTER X.

Boston.—Blind Asylum and Laura Bridgeman.—Respect for Freedom of Conscience.—Cemetery of Mount Auburn.—Channing's Cenotaph.—Episcopal Churches.—Unitarian Congregations.—Eminent Preachers.—Progress of Unitarians why slow.—Their Works reprinted in England.—Nothingarians.—Episcopalian Asceticism.—Separation of Religion and Politics.

During our stay at Boston we visited the Perkins' Institution, or Asylum for the Blind, and found Laura Bridgman, the girl who has been blind and deaf from infancy, much grown since we saw her four years ago. She is now sixteen, and looks very intelligent. She was reading when we entered, and we were told that formerly, when so engaged and alone, she used to make with one hand the signs of all the words which she felt out with the other, just as an illiterate beginner speaks aloud each sentence as he spells it. But the process of conveying the meaning of the words to her mind is now far too rapid for such delay, and the hand not occupied in reading remains motionless. We were afterward delighted to watch her while she was following the conversation of two other dumb children who were using the modern single-hand alphabet. She was able to comprehend all the ideas they were exchanging, and to overhear, as it were, every word they said, by making her fingers play, with fairy lightness, over theirs, with so slight a touch, as not in the least degree to interfere with the freedom of their motions. We saw her afterward talk with Dr. Howe, with great rapidity and animation, pointing out accurately the places on a map while he gave a lesson in geography. She indulged her curiosity in examining my wife's dress, and, taking her hand, told her which was her wedding ring, and then began to teach her the deaf and dumb alphabet. She is always aware whether it is a lady's hand she touches, and is shy toward a stranger of the other sex. As she is now in communication with no less than a hundred acquaintances, she has grown much more like other children than formerly.

We learnt from Dr. Howe that the task of carrying on her education has become more and more arduous, for she is naturally clever, and her reflective powers have unavoidably ripened much faster than the perceptive; so that at an age when other children would be satisfied to accumulate facts by the use of their eyes, her chief curiosity is directed to know the causes of things. In reading history, for example, where there is usually a continued description of wars and battles, she must be told the motives for which men slaughter each other, and is so distressed at their wickedness, that she can scarcely be induced to pursue the study.

To be able to appreciate justly the judicious treatment of those to whose training she owes her wonderful progress, it would be necessary to be practically acquainted with the disappointments of persons who undertake to teach pupils who are simply blind, and not suffering, like Laura, under the double privation of the senses of sight and hearing.

Great pains had been taken to make one of the boys, whom we saw, have a correct idea of a horse, he had got by rote a long list of characteristics, and had felt the animal, and the mortification of the master may be conceived on discovering that after all the child could not be sure whether the creature had three, four, or five legs. After a few days' intercourse with the blind, we no longer marvel that precocious children, who begin to read early and get by heart and recite long poems, or become knowing by keeping company with grown-up people, are so often overtaken or left behind by those who have been neglected, and have spent their time at play. For when the truants are supposed to be most idle, they may, in reality, be storing their minds with a multitude of facts, to give a detailed description of which to a student, in or out of a blind asylum, would fill volumes.

Dr. Howe told us of a blind Frenchman in the establishment, who could guess the age of strangers, by hearing their voices, much more accurately than he and others who could see as well as talk with them.

On looking over the annual reports of the trustees, I observed that on Sunday the pupils, about a hundred in number, and

belonging to various sects, attend public worship in several different churches, they themselves, or their parents, choosing some particular church. "Many of them," says the report, "attend Sabbath schools, and, as care is taken to exclude sectarian doctrines from the regular course of instruction, the opinions of the pupils respecting doctrinal matters in religion are formed upon the basis prescribed by the parents."

The assurance here given to the public is characteristic of a settled purpose, every where displayed by the New Englanders, to prevent their charitable bequests, as well as their great educational establishments, from becoming instruments of proselytizing, or serving as bribes, to tempt parents, pupils, or the poor to renounce any part of their hereditary creed for the sake of worldly advantages. Such conduct, implying great delicacy of feeling in matters of conscience, and a profound respect for the sacredness of religious obligations, is worthy of the descendants of men who went into exile, and braved the wilderness and the Indian tomahawk, rather than conform outwardly to creeds and rituals of which they disapproved.

Oct. 29.—Went to Cambridge to visit the cemetery of Mount Auburn, where a large extent of wild, unreclaimed, hilly ground, covered with oak and pine, has been inclosed for a public burial-place. From the highest eminence there is a fine view of the surrounding country. Since I was here in 1842, a chapel has been erected of granite, in the Gothic style, and in good taste, with painted glass from Edinburgh in the windows, and a handsome entrance gate. The chapel is to serve as a Westminster Abbey, Pantheon, or Walhalla, to contain statues, busts, and monuments of distinguished men. A cenotaph has been placed in the grounds in honor of Dr. Channing, with an inscription written by a friend, in a plain, unambitious style, such as Channing himself would have wished. I rejoiced to hear that as his funeral procession was passing through the streets of Boston, the bell of the Roman Catholic chapel was tolled among the rest, and I recollected with pleasure the conversations I had had with him in 1841. They who witness the impulse given by him to the cause of popular education, the increasing liberality of

sentiment in New England on matters of religion, and the great popularity of his works, might desire to inscribe on his tomb—

"E'en in *his* ashes live their wonted fires."

Some of the Episcopal churches in Boston are conducted on the high, and others on the low church model; and the Tractarian movement has had the effect here, as in England, not of establishing uniformity by a strict adherence to one rubric, but of producing a much greater variety than formerly in the manner of performing public worship. If, besides striking out the Athanasian Creed, the American Episcopal Church had omitted the Nicene Creed, as they first proposed in 1785, and had condensed and abridged the Thirty-nine Articles to twenty, measures from which they were dissuaded by the English hierarchy, from whose hands their first bishops required consecration, a schism might probably have taken place when the Tractarian movement occurred, and they might have separated into two churches far more distinct than that of the Drummondites and their opponents, or the partisans of the Scotch and English rubric north of the Tweed.

In the Stone, or King's Chapel, the English liturgy is used, with such omissions and alterations as are required to suit the opinions of Unitarians, for that chapel was transferred from the Anglican to the Unitarian Church by the conversion of the minister and majority of the pew-holders. But in almost all the other Unitarian churches, the service resembles in form that of the established church of Scotland. Before my first visit to Boston, I had been led to believe that the majority of the citizens were Unitarians; whereas I found, on inquiry, that although they may exceed in number any other single sect, and comprise not a few of the richest citizens, they do not constitute above one-fifth of the whole population, and scarcely more than a tenth in Massachusetts generally. There is, however, another sect, calling themselves Christians (pronounced Chr*y*stians), prevailing largely in New England, which denies the doctrine of the Trinity, and I am told that many who worship in other "orthodox" congregations are heterodox on this point, although they do not choose to become separatists. One of them observed

to me that he thought it nearly as presumptuous to acquiesce in the negative as in the affirmative of the propositions laid down on this subject in the Athanasian Creed. "We are," he said, "like children born blind, disputing about colors."

The prominent position occupied by the Unitarians arises, not from their number, nor their wealth, however considerable this may be, but from their talent, earnestness, and knowledge. Many of the leading minds in the Union belong to this sect, and among them, Channing, Sparks, Dewey, and other well-known authors, have been converts from the Congregationalists.

To have no creed, no standard to rally round, no fixed canons of interpretation of Scripture, is said to be fatal to their progress. Yet one of their body remarked to me that they might be well satisfied that they were gaining ground, when it could be said that in the last thirty years (since 1815) the number of their ministers had increased in a tenfold ratio, or from fifty to five hundred, whereas the population had only doubled in twenty-five years. He also reminded me that their ranks are scarcely ever recruited from foreign emigrants, from whom the Romanists, Presbyterians, Methodists, Baptists, and Episcopalians annually draw large accessions. A more kindly feeling has of late years sprung up between the Unitarians and Congregationalists, because some of the most eminent writers of both sects have joined in defending themselves against a common adversary, namely, those rationalists who go so far as to deny the historical evidence of the miracles related in the New Testament, and who, in some other points, depart more widely from the Unitarian standard, than does the latter from that of Rome itself. Norton, author of "The Genuineness of the Gospels" may be mentioned, as one of the celebrated Unitarian divines who has extorted from the more liberal members of all "orthodox" denominations the praise of being a defender of the faith.

In the course of my two visits to the United States, I enjoyed opportunities of hearing sermons preached by many of the most eminent Unitarians—among them were Channing, Henry Ware, Dewey, Bellows, Putnam, and Gannet—and was much struck, not only with their good sense and erudition, but with the fervor

of their eloquence. I had been given to understand that I should find a want of warmth in their discourses, that they were too cold and philosophical, and wanting in devotional feeling; but, on the contrary, there were many of them most impressive, full of earnestness and zeal, as well as of original views and instruction. One of the chief characteristics was the rare allusion made to the Old Testament, or to controverted points of doctrine, or to the mysteries of the Christian religion, and the frequency with which they dwelt on the moral precepts and practical lessons of the Gospels, especially the preaching of Christ himself. Occasional exhortations to the faithful, cheerfully to endure obloquy for the sake of truth, and to pay no court to popularity, an undue craving for which was, they said, the bane of a democracy, convinced me how much the idea of their standing in a hostile position to a large numerical majority of the community was present to their minds. On some occasions, however, reference was naturally made to doctrinal points, particularly to the humanity of Christ, his kindred nature, and its distinctness from that of the eternal, omnipotent, and incorporeal Spirit which framed the universe; but chiefly on occasions when the orator was desirous of awakening in the hearts of his hearers emotions of tenderness, pity, gratitude, and love, by dwelling on the bodily sufferings of the Redeemer on the cross. More than once have I seen these appeals produce so deep a sensation, as to move a highly educated audience to tears; and I came away assured that they who imagine this form of Christianity to be essentially cold, lifeless, and incapable of reaching the heart, or of powerfully influencing the conduct of men, can never have enjoyed opportunities of listening to their most gifted preachers, or had a large personal intercourse with the members of the sect.

When I wished to purchase a copy of the writings of Channing and of Dewey in Boston, I was told that I could obtain more complete and cheaper editions in London than in the United States; a proof, not only how much they are read in England, but that the pecuniary interests of British authors are not the only ones which suffer by the want of an international copyright. On inquiring of the publishers at Boston, as to the extent of the

sale of Channing's works in the United States, I was informed that several of them, published separately, had gone through many editions, and no less than 9000 copies of the whole, in six volumes, had been sold already (1845), and the demand for them was on the increase, many copies having been recently ordered from distant places in the West, such as St. Louis and Chicago. A reprint of the same edition at Glasgow, has circulated widely in England, and the reading of it in America is by no means confined to Unitarians, the divines of other denominations, especially the Calvinists, being desirous to know what has been written against them by their great antagonist.

Having been informed by one of my friends that about a fifth of all the New Englanders were "Nothingarians," I tried, but with little success, to discover the strict meaning of the term. Nothing seems more vague and indefinite than the manner of its application. I fancied at first that it might signify deists or infidels, or persons careless about any religious faith, or who were not church-goers; but, although it may sometimes signify one or all of these, I found it was usually quite otherwise. The term latitudinarian, used in a good sense, appeared most commonly to convey the meaning; for a Nothingarian, I was informed, was indifferent whether he attended a Baptist, Methodist, Presbyterian, or Congregationalist church, and was often equally inclined to contribute money liberally to any one or all of them. A Methodist writer of some eminence remarked to me, that the range of doctrines embraced by these denominations, was not greater, if so great, as that which comprehended within the same pale a high tractarian and a low churchman, and that he who would indifferently subscribe to these two forms of Episcopalianism, might with equal propriety be styled a Nothingarian. In other cases I ascertained that the term Nothingarian was simply used for persons who, though they attended worship regularly in some church, had never been communicants. One of the latter, an Episcopalian, once said to me, "I have never joined any church;" and then in explanation added, "it would be hard at my age to renounce society, dancing, and public amusements." I expostulated soon afterward with an Episcopalian minister in Virginia, observing

that such ideas of austerity and asceticism were not consistent with the spirit of the Anglican Church. This he admitted, but pleaded the absolute necessity of extreme strictness to enable them to efface the stigma transmitted to them from colonial times; for in the Southern states, particularly in Virginia, the patronage of the mother country, in filling up livings, was for a century scandalously abused, and so many young men of profligate and immoral habits were sent out, as to create a strong prejudice against the Established Church of England in the minds of the more zealous and sincere religionists.

On one of my voyages home from America, an officer of rank in the British army lamented that the governor of one of our colonies had lately appointed as Attorney-General one who was an atheist. I told him I knew the lawyer in question to be a zealous Baptist. "Yes," he replied, "Baptist, Atheist, or something of that sort." I have no doubt that if this gallant colonel should visit New England, his estimate of the proportion of Nothingarians in the population would be very liberal.

Traveling as I did in 1845–6, through a large part of the Union, immediately after the close of the protracted contest for the Presidency, when the votes in favor of Mr. Clay and Mr. Polk had been nearly balanced, I was surprised to find in the north, south, and west, how few of the Americans with whom I conversed as traveling companions, could tell me to what denomination of Christians these two gentlemen belonged. I at length ascertained that one of them was an Episcopalian, and the other a Presbyterian. This ignorance could by no means be set down to indifferentism. Had one of the candidates been a man of immoral character, it would have materially affected his chance of success, or probably if he had been suspected of indifference about religion, and not a few of the politicians whom I questioned were strongly imbued with sectarian feelings; but it was clear that in the choice of a first magistrate their minds had been wholly occupied with other considerations, and the separation of religion and politics, though far from being as complete as might be wished, is certainly one of the healthy features of the working of the American institutions

CHAPTER XI.

Boston.—Whig Caucus.—Speech of Mr. Webster.—Politics in Massachusetts.—Election of Governor and Representatives.—Thanksgiving Day and Governor's Proclamation.—Absence of Pauperism.—Irish Repeal Meeting.—New England Sympathizer.—Visit to a Free School.—State Education.—Pay and Social Rank of Teachers.—Importance of the Profession.—Rapid Progress and Effects of Educational Movement.—Popular Lectures.—Lending Libraries.

Nov. 10, 1845.—Went to a great meeting of about 3500 people in Faneuil Hall, where they were discussing the election of the governor and executive officers of the State. It was called a Whig caucus, being only attended by persons of one political party, or if others were present, they were there only by courtesy, and expected to be silent, and not interrupt the harmony of the proceedings. When I entered, I found Mr. Daniel Webster on his legs. Since the arrival of the last mail steamer from Liverpool fears had been entertained that the pretensions of the Cabinet of Washington to the whole, or greater part of Oregon, must end in a war between England and the United States. This topic was therefore naturally uppermost in the minds of a peace-loving and commercial community. The cautious and measured expressions of the Whig statesman when out of office, and his evident sense of the serious responsibility incurred by one who should involve two great nations in war, formed a striking contrast to the unguarded tone of the late inaugural address of the President of the Union on the same subject. I was amused to hear frequent references made to the recent debate in the British House of Commons, the exact words of Sir Robert Peel and others being quoted and commented upon, just as if the discussion had been simply adjourned from Westminster to Boston. The orator rebuked the blustering tone of defiance, in which demagogues and newspapers in some parts of the Union were indulging against England. He then condemned the new constitution

of Texas, which prohibits the Legislature from ever setting the bondman free, and deprecated the diversion made from the ranks of the Whigs by the Abolitionists, who, by setting up a candidate of their own for the Presidentship, had enabled their opponents to carry a man pledged to the annexation of Texas. At the same time he gave this party the credit of being as conscientious as they were impracticable. He then alluded to another "separate organization," as it is here called, namely, that of the "Native Americans," which had in like manner defeated the object they had in view, by dividing the Whigs, the majority of whom agreed in thinking the present naturalization laws very defective, and that a stop should be put to fraudulent voting. The introduction of a long Latin quotation from Cicero showed that the speaker reckoned on having a considerable number at least of well-educated men in his large audience. The frequent mention of the name of Governor George N. Briggs, the initial letter only of the second appellative being pronounced, grated strangely on my English ear; for though we do not trouble ourselves to learn all the Christian names of our best actors, as Mr. T. P. Cooke and Miss M. Tree, we are never so laconic and unceremonious in dealing with eminent public men. I had asked several persons what K. signified in the name of the President, James K. Polk, before I ascertained that it meant Knox; but, in the United States, it might have no other signification than the letter K.; for, when first in Boston, I requested a friend to tell me what B. stood for in his name, and he replied, "For nothing; my surname was so common a one, that letters addressed to me were often mis-sent, so I got the Post-Office to allow me to adopt the letter B."

I came away from this and other public meetings convinced that the style of speaking of Mr. Webster, Mr. Everett, Mr. Winthrop, and some others, would take greatly in England, both in and out of parliament. It was also satisfactory to reflect, that in Massachusetts, where the whole population is more educated than elsewhere, and more Anglo-American, having less of recent foreign admixture, whether European or African, the dominant party is against the extension of slavery to new regions like Texas,

against territorial aggrandizement, whether in the north or south, and against war. They are in a minority it is true : but each state in the Union has such a separate and independent position, that, like a distinct nation, it can continue to cherish its own principles and institutions, and set an example to the rest, which they may in time learn to imitate. The Whigs were originally in favor of more centralization, or of giving increased power to the federal executive, while the democratic party did all they could to weaken the central power, and successfully contended for the sovereign rights and privileges of each member of the confederation. In so doing they have perhaps inadvertently, and without seeing the bearing of their policy, guarded the older and more advanced commonwealths from being too much controlled and kept down by the ascendency of newer and ruder states.

A few days later, I went to see the electors give their votes. Perfect order and good-humor prevailed, although the contest was a keen one. As I approached the poll, the agents of different committees, supposing that I might be an elector, put into my hands printed lists, containing the names of all the candidates for the offices of Governor, Lieutenant-governor, five senators, and thirty-five representatives. Every registered voter is entitled to put one of these "tickets" into the balloting box. The real struggle was between the Whigs and Democrats, the former of whom carried the day ; but, besides their tickets, two others were presented to me, one called the Native American, and the other the Working Man's ticket. The latter had for its emblem a naked arm, wielding a hammer, and for its motto, "The strong right arm of labor." The five senators proposed in this list, consisted of two printers, a carpenter, a blacksmith, and a surveyor, and among the representatives were four shoemakers, one tailor, eight carpenters, four printers, an engineer, &c.

I heard Americans regret, that besides caucuses there are no public meetings here where matters are debated by persons of opposite parties and opinions, such as are sometimes held in England. I was surprised to hear that such experiments were of rare occurrence in a country where men opposed in politics frequently argue with so much good temper, and where, in so

many hotels and taverns, newspapers of all shades of opinion are taken in just as in our great club-houses in London, affording opportunities of knowing what can be said on all sides of every question. I have since learnt from correspondents, that, in a period of political excitement, the people in many parts of Massachusetts have begun to engage different lecturers to explain to them the opposite facts, views, and arguments adduced for and against the chief subjects under discussion.

Nov. 27.—This day, Thanksgiving Day, and the 4th of July, Independence Day, are the only two holidays in the American calendar. The Governor has, they say, as usual, made a bad guess in regard to weather, for there is a pelting rain. It was indeed ascertained by actual measurement at Cambridge, that in nineteen hours between yesterday evening and to-day, at four o'clock, there has fallen no less than four and a half inches of rain, or one-eighth part of the average of the whole year, which amounts to thirty-six inches at Boston. By this unlucky accident many a family gathering has been interrupted, and relatives have been unable to come in from the country to join a merry meeting, corresponding to that of an English Christmas Day. Many a sermon, also, carefully prepared for the occasion, has been preached to empty pews; but the newspapers inform us, that some of these effusions will be repeated on Sunday next. Sixteen states have now adopted this New England custom of appointing a day for thanksgiving, and it is spreading fast, having already reached South Carolina, and even Louisiana. A month before, I had heard with interest the Governor's proclamation, read in all the churches, full of good feeling and good sense. He called on the people of the state, now that the harvest was gathered in, to praise the God of Heaven for his bounties, and in their cheerful family circles to render to Him a tribute of thanksgiving for His goodness:—

"Let us praise Him, that, under His protecting Providence, the institutions of state, of religion, of learning and education, established by the prudence and wisdom of our fathers, under which their children have been prosperous and happy, have come down to us unimpaired and in full vigor:

"That the various classes of our citizens, under the mild and equal

government of laws made by themselves, pursue, unmolested, upon the land and upon the sea, their peaceful occupations:

"That although we have heard the distant rumor, and seen the preparations for war our common country is yet at peace with the world."

In no part of the address was any claim set up to the peculiar favor of God, or his special intervention in chastising the nation for particular transgressions; nothing to imply that He does not govern the world by fixed and general laws, moral and physical, which it is our duty to study and obey, and which, if we disobey, whether from ignorance or willfulness, will often be made the instruments of our punishment even in this world. The proclamation concluded thus, in the good old style:

"Given at the Council Chamber, in Boston, this 1st day of October, in the year of our Lord one thousand eight hundred and forty-five, and of the Independence of the United States the seventieth.

"GEORGE N. BRIGGS.

"By his Excellency the Governor, with the advice and consent of the Council.

"JOHN G. PALFREY, Secretary.

"God save the Commonwealth of Massachusetts."

The almost entire absence of pauperism even in the large towns, except among the old and infirm, forms a striking point of contrast between the state of things in New England and in Europe. One of my friends, who is serving on a committee in Boston to see that the poor who are too old to work have all necessary comforts, has just ordered, as one of the indispensables, a carpet for the bed-side of an old woman. Yet, within five miles of Boston, some of the newly arrived emigrants of the lower class of Irish, may now be seen living in mud huts by the side of railway cuttings, which they are employed to dig, who are regarded by many of the native-born laborers with no small disgust, not only as the most ignorant and superstitious of mortals, but as likely, by their competition, to bring down the general standard of wages. The rich capitalists, on the other hand, confess to me, that they know not how they could get on with the construction of public works, and obtain good interest for their money, were they deprived of this constant influx of foreign labor.

They speak also with kindness of the Irish, saying they are most willing to work hard, keep their temperance vows, and, in spite of the considerable sums drawn from them by the Catholic priests, are putting by largely out of their earnings into the Savings Banks. It is also agreed that they are most generous to their poor relations in Ireland, remitting money to them annually, and sometimes enough to enable them to pay their passage across the Atlantic. At the same time they confess, with much concern, that the efforts now making by the people at large, aided by the wealthiest class, to establish a good system of state instruction, and to raise the moral and intellectual character of the millions, must be retarded by the intrusion of so many rude and ignorant settlers. Among other mischiefs, the political passions and party feelings of a foreign country are intruded into the political arena, and a tempting field laid open to demagogues of the lowest order.

Returning home one night after dark from a party, I heard music in a large public building, and, being told it was a repeal meeting held by the Irish, had the curiosity to look in. After a piece of instrumental music had been performed, an orator, with an Irish accent, addressed the crowd on the sufferings of the Irish people precisely as if he had forgotten on which side of the Atlantic he then was. He dwelt on the tyranny of the Saxons, and spoke of repeal as the only means of emancipating their country from British domination, and solicited money in aid of the great cause. Seeing, with no small surprise, an industrious native-born artisan of Boston, whom I knew, in the crowd, I asked him, as we went out together, whether he approved of the objects of the meeting. He belonged to the extreme democratic party, and answered, very coolly and quite seriously, "We hope that we may one day be able to do for Ireland what France did for the United States in our great struggle for independence."

On my return home, I found that my pocket had been picked of a purse containing fortunately a few dollars only, an accident for which I got no commiseration, as my friends hoped it would be a lesson to me to keep better company in future.

That a humble mechanic of Boston should be found who

indulged in wild projects for redressing the wrongs of the Hibernian race, ought not to create wonder, when I state that before the end of the year 1845, a resolution was moved in Congress, by Mr. M'Connell, one of the members for Alabama, after he had been talking much about the spirit of Christian love and peaceful brotherhood which distinguished the American republic, to the following effect:—"That the Irish, ground down by British misrule, have for centuries groaned under a foreign monarchical yoke, and are now entitled to share the blessings of our free institutions." I am happy to say, however, that this absurd motion was not even seconded.

The population of Boston, exclusive of Charlestown, Roxbury, and Cambridge (which may be regarded as suburbs), is at present about 115,000, of which 8000 are Roman Catholics, chiefly of Irish extraction; but there are besides many Scotch and English emigrants in the city. In order to prove to me how much may be done to advance them in civilization in a single generation, I was taken to a school where nine-tenths of all the children were of parents who had come out from England or Ireland. It was not an examination day, and our visit was wholly unexpected. We entered a suite of three well-aired rooms, containing 550 girls. There were nine teachers in the room. The pupils were all between the ages of nine and thirteen, the greater portion of them the daughters of poor laborers, but some of them of parents in good circumstances. Each scholar was seated on a separate chair with a back to it, the chair being immovably fixed to the ground to prevent noise. There was no uniformity of costume, but evidently much attention to personal neatness, nearly all of them more dressed than would be thought in good taste in children of a corresponding class in England. They had begun their studies at nine o'clock in the morning, and are to be six hours at school, studying fifty minutes at a time, and then being allowed ten minutes for play in a yard adjoining. I observed some of the girls very intent on their task, leaning on their elbows and in other careless attitudes, and we were told by the masters that they avoid as much as possible finding fault with them on minor points when they are studying. The only punishments are a

reprimand before the class, and keeping them back after school hours. The look of intelligence in the countenances of the greater number of them was a most pleasing sight. In one of the upper classes they were reading, when we went in, a passage from Paley "On Sleep," and I was asked to select at random from the school-books some poem which the girls might read each in their turn. I chose Gray's Elegy in a Churchyard, as being none of the simplest for young persons to understand. They each read a verse distinctly, and many of them most gracefully, and explained correctly the meaning of nearly all the words and allusions on which I questioned them.

We afterward heard the girls of the arithmetic class examined in algebra, and their answers showed that much pains had been taken to make them comprehend the principles on which the methods of calculation depended. We then visited a boy's grammar school, and found there 420 Protestant and 100 Catholic boys educated together. We remarked that they had a less refined appearance and were less forward in their education than the girls whom we had just seen, of the same age, and taken from the same class in society. In explanation I was told that it is impossible to give the boys as much schooling, because they can earn money for their parents at an earlier age.

The number of public or free schools in Massachusetts in 1845–6, for a population of 800,000 souls, was about 3500, and the number of male teachers 2585, and of female 5000, which would allow a teacher for each twenty-five or thirty children, as many as they can well attend to. The sum raised by direct taxation for the wages and board of the tutors, and for fuel for the schools, is upward of 600,000 dollars, or 120,000 guineas; but this is exclusive of all expenditure for school-houses, libraries, and apparatus, for which other funds are appropriated, and every year a great number of newer and finer buildings are erected.

Upon the whole about one million of dollars is spent in teaching a population of 800,000 souls, independently of the sums expended on private instruction, which in the city of Boston is supposed to be equal to the money levied by taxes for the free

schools, or 260,000 dollars (55,000*l.*). If we were to enforce a school-rate in Great Britain, bearing the same proportion to our population of twenty-eight millions, the tax would amount annually to more than seven millions sterling, and would then be far less effective, owing to the higher cost of living, and the comparative average standard of incomes among professional and official men.

In Boston the master of the Latin School, where boys are fitted for college, and the master of the High School, where they are taught French, mathematics, and other branches preparatory to a mercantile career, receive each 2400 dollars (500*l.*), the governor of the state having only 2500 dollars. Their assistants are paid from 1800 to 700 dollars (370*l.* to 150*l.*). The masters of the grammar schools, where boys and girls are taught in separate school-houses English literature, general history, and algebra, have salaries of 1500 dollars (315*l.*), their male assistants 600 (125*l.*), and their female 300 (65*l.*). The mistresses of schools, where children from four to seven years old are taught to read, receive 325 dollars (70*l.*). In Salem, Roxbury, Lowell, and other large towns, where living is more moderate, the salaries are about one-third less; and in rural districts, where the schools are not kept open for the whole year, the wages of the teachers are still smaller.

The county of Worcester, Massachusetts, for example, has a population of about 100,000, and the number of schools in it is about 543, the schools being kept open some four, others twelve months, and on an average six months in the year. The male teachers, of whom there are about 500, receive 30 dollars (6*l.* 6*s.*) a month; the women teachers, of whom there are 700, about 13 dollars a month (2*l.* 15*s.*).

Among other changes, we are told, in the State Reports, that the number of female teachers has been augmented more rapidly than that of the males, especially in schools where the youngest pupils are taught, because the services of women cost less, and are found to be equally, if not more, efficient. But my informants in general were desirous that I should understand that the success of their plan of national education does not depend so much

on the number and pay of the teachers as on the interest taken in it by the entire population, who faithfully d vote more time and thought to the management of the schools than to any other public duty.

The cost of living in New England may, on the whole, be taken to be at least one-third less than in Great Britain; and the spirit of the political institutions, the frugal manner of conducting the government, the habits of society, and a greater general equality of fortunes, where the custom of primogeniture does not prevail, causes the relative value of incomes such as those above enumerated, to confer a more respectable social position than they would do with us. I was assured that in the country towns the schoolmasters associate with the upper class of citizens, holding as good a place in society as the clergy and medical men, but not ranking so high as the lawyers.

On this point, however (the relative position of the teachers), I found great differences of opinion among my informants; but a general agreement that their pay and social rank ought to be raised, so as to enable the state to command the services of men and women of the best abilities and accomplishments.

Channing had, for many years before his death, insisted on the want of institutions to teach the art of teaching. There are now several of these normal schools in full activity, where a course of three years' instruction is given. As yet, however, few can afford to attend more than one year; but even this short training has greatly raised the general standard of efficacy, and the beneficial influence has extended even to schoolmasters who have not yet availed themselves of the new training. The people have, in fact, responded generously to the eloquent exhortations of Channing, not to economize, for the sake of leaving a fortune to the rising generation, at the expense of starving their intellects and impoverishing their hearts. It was a common prejudice, he said, and a fatal error to imagine that the most ordinary abilities are competent to the office of teaching the young. "Their vocation, on the contrary, is more noble even than that of the statesman, and demands higher powers, great judgment, and a capacity of comprehending the laws of thought and moral action, and the

various springs and motives by which the child may be roused to the most vigorous use of all its faculties." *

Nevertheless, some of his most enthusiastic admirers confessed to me that they could not assent to his doctrine, that "to teach, whether by word or action, is the highest function on earth," unless young men and women, between the ages of seventeen and twenty-two, are the pupils, instead of children between four and sixteen. They expressed their misgivings and fears that the business of the schoolmaster, who is to teach reading and writing and the elements of knowledge, must check the development of the mind, if not tend to narrow its powers. As the real friends of progress, they had come reluctantly to this conclusion; but they admitted that to despond at present would be premature. The experiment of promoting the teacher of every school to that rank in society which the importance of his duties entitles him to hold, and of training him in his art, has never yet been tried.

We have yet to learn what may be the effect of encouraging men of superior energy and talent, who have a natural taste for the calling, to fit themselves for the profession. It must doubtless entail, like every other liberal calling, such as the legal, medical, clerical, military, or mercantile, a certain amount of drudgery and routine of business; but, like all these departments, it may afford a field for the enlargement of the mind, if they who exercise it enjoy, in a like degree, access to the best society, can exchange thoughts with the most cultivated minds in their district, and have leisure allowed them for self-culture, together with a reasonable hope, if they distinguish themselves, of being promoted to posts of honor and emolument, not in other professions, such as the clerical, but in their own. The high schools of Boston, supported by the state, are now so well managed, that some of my friends, who would grudge no expense to engage for their sons the best instructors, send their boys to them as superior to any of the private establishments supported by the rich at great cost. The idea has been recently agitated of providing similar free-schools and colleges for girls, because they

* Glasgow Ed., vol i. p. 391.

could more easily be induced to stay until the age of sixteen. Young men, it is said, would hate nothing so much as to find themselves inferior in education to the women of their own age and station.

Of late years the improvement of the schools has been so rapid, that objects which were thought Utopian even when Channing began his career, have been realized; and the more sanguine spirits, among whom Mr. Horace Mann, Secretary of the Public Board of Education, stands pre-eminent, continue to set before the eyes of the public an ideal standard so much more elevated, as to make all that has hitherto been accomplished appear as nothing. The taxes self-imposed by the people for educational purposes are still annually on the increase, and the beneficial effects of the system are very perceptible. In all the large towns Lyceums have been established, where courses of lectures are given every winter, and the qualifications of the teachers who deliver them are much higher than formerly. Both the intellectual and social feelings of every class are cultivated by these evening meetings, and it is acknowledged that with the increased taste for reading, cherished by such instruction, habits of greater temperance and order, and higher ideas of comfort, have steadily kept pace.

Eight years ago (1838) Channing observed that "millions, wearied by their day's work, have been chained to the pages of Walter Scott, and have owed some bright evening hours and balmier sleep to his magical creations;" and he pointed out how many of the laboring classes took delight in history and biography, descriptions of nature, in travels and in poetry, as well as graver works. In his Franklin Lecture, addressed, in 1838, to a large body of mechanics and men earning their livelihood "by manual labor," he says, "Books are the true levelers, giving to all who will faithfully use them the society and spiritual presence of the best and greatest of our race; so that an individual may be excluded from what is called good society, and yet not pine for want of intellectual companionship."*

When I asked how it happened that in so populous and rich

* Channing, vol. ii. p. 378.

a city as Boston there was at present (October, 1845) no regular theater, I was told, among other reasons, that if I went into the houses of persons of the middle and even humblest class, I should often find the father of a family, instead of seeking excitement in a shilling gallery, reading to his wife and four or five children one of the best modern novels, which he has purchased for twenty-five cents; whereas, if they could all have left home, he could not for many times that sum have taken them to the play. They often buy, in two or three successive numbers of a penny newspaper, entire reprints of the tales of Dickens, Bulwer, or other popular writers.

Dana, now a lawyer in Boston, and whose acquaintance I had the pleasure of making there, has, in his singularly interesting and original work, entitled "Two Years before the Mast," not only disclosed to us a lively picture of life in the forecastle, but has shown incidentally how much a crew, composed of the most unpromising materials, rough and illiterate, and recruited at random from the merchant service of different nations, could be improved by associating with a single well-educated messmate. He was able, on one of the few holidays which were granted to them in California by the most tyrannical of captains, to keep them from going ashore, where they would have indulged in dissipation, by reading to them for hours Scott's historical tale of "Woodstock." We ought scarcely, then, to wonder, after what I have said of the common schools of this city, that crowded audiences should be drawn night after night, through the whole winter, in spite of frost and snow, from the class of laborers and mechanics, mingled with those of higher station, to listen with deep interest to lectures on natural theology, zoology, geology, the writings of Shakspeare, the beauties of "Paradise Lost," the peculiar excellencies of "Comus" and "Lycidas," treated in an elevated style by men who would be heard with pleasure by the most refined audiences in London.

Still, however, I hear many complaints that there is a want of public amusements to give relief to the minds of the multitude, whose daily employments are so monotonous that they require, far more than the rich, opportunities of innocent recreation, such

as concerts, dancing, and the theater might give, under proper regulations; for these are now usually discouraged by religionists, who can find no other substitute for them but sermons and reiterated church services.

Among the signs of the times, and of the increasing taste for reading, the great number of lending libraries in every district must not be forgotten. Toward the purchase of these the State grants a certain sum, if an equal amount be subscribed by the inhabitants. They are left to their own choice in the purchase of books; and the best English poets and novelists are almost always to be met with in each collection, and works of biography, history, travels, natural history, and science. The selection is carefully made with reference to what the people will read, and not what men of higher education and station think they ought to read.

CHAPTER XII.

Boston, Popular Education, continued. — Patronage of Universities and Science.—Channing on Milton.—Milton's Scheme of teaching the Natural Sciences. — New England Free Schools. — Their Origin. — First Puritan Settlers not illiterate.—Sincerity of their Religious Faith.—Schools founded in Seventeenth Century in Massachusetts.—Discouraged in Virginia.—Sir W. Berkeley's Letter.—Pastor Robinson's Views of Progress in Religion.—Organization of Congregational Churches.—No Penalties for Dissent.—Provision made for future Variations in Creeds. —Mode of Working exemplified.—Impossibility of concealing Truths relating to Religion from an educated Population.—Gain to the Higher Classes, especially the Clergy.—New Theological Colleges.—The Lower Orders not rendered indolent, discontented, or irreligious by Education. —Peculiar Stimulus to Popular Instruction in the United States.

It was naturally to be apprehended that, in a pure democracy, or where the suffrage is nearly universal, the patronage of the state would be almost entirely confined to providing means for mere primary education, such as reading, writing, and ciphering. But such is not the case in Massachusetts, although the annual grants made to the three universities of Harvard, Amherst, and Williams, are now becoming inadequate to the growing wants of a more advanced community, and strenuous exertions are making to enlarge them. In the mean time, private bequests and donations have of late years poured in upon Harvard University from year to year, some of them on a truly munificent scale. Since my first visit to Cambridge, professorships of botany, comparative anatomy, and chemistry have been founded. There was previously a considerable staff for the teaching of literature, law, and medicine; and lately an entire new department for engineering, natural philosophy, chemistry, geology, mineralogy, and natural history, in their application to the arts, has been instituted. One individual, Mr. Abbott Lawrence, a gentleman still in the prime of life, has contributed no less a sum than 100,000 dollars (20,000 guineas) toward the support

of this department. One of the new chairs is now filled by a zoologist of the highest European reputation, Professor Agassiz. A splendid bequest also, of equal amount (100,000 dollars), has recently been made to the Cambridge Observatory, for which the country had already obtained, at great cost, a large telescope, which has resolved the great nebula in Orion, and has enabled the astronomer, Mr. Bond, simultaneously with an English observer, Mr. Lassell, to discover a new satellite of Saturn.

That the State, however, will not be checked by any narrow utilitarian views in its patronage of the university and the higher departments of literature and science, we may confidently infer from the grants made so long ago as March, 1830, by the frugal Legislature of Massachusetts, for a trigonometrical survey, and for geological, botanical, and zoological explorations of the country, executed by men whose published reports prove them to have been worthy of the trust. It was to be expected that some demagogues would attempt to persuade the people that such an expenditure of public money was profligate in the extreme, and that as the universities have a dangerous aristocratic tendency, so these liberal appropriations of funds for scientific objects were an evidence that the Whig party were willing to indulge the fancies of the few at the charge of the many. Accordingly, one orator harangued the fishermen of Cape Cod on this topic, saying that the government had paid 1500 dollars out of the Treasury to remunerate Dr. Storer—for what? for giving Latin names to some of the best known fish; for christening the common cod *Morrhua americana*, the shad *Alosa vulgaris*, and the fall herring *Clupea vulgaris*. His electioneering tactics did not succeed; but might they not have gained him many votes in certain English constituencies? Year after year, subsequently to 1837, the columns of "the leading journal" of Great Britain were filled with attacks in precisely the same style of low and ignorant ridicule against the British Association, and the memoirs of some of the ablest writers in Europe on natural history and science, who were assailed with vulgar abuse. Such articles would not have been repeated so perseveringly, nor have found an echo in the "British Critic" and several magazines, had they not found sym-

pathy in the minds of a large class of readers, who ought, by their station, to have been less prejudiced, and who, in reality, have no bigoted aversion to science itself, but simply dread the effects of its dissemination among the people at large.

It is remarkable that a writer of such genius and so enlarged a mind as Channing, who was always aiming to furnish the multitude with sources of improvement and recreation, should have dwelt so little on the important part which natural history and the physical sciences might play, if once the tastes of the million were turned to their study and cultivation. From several passages in his works, it is evident that he had never been imbued with the slightest knowledge or feeling for such pursuits; and this is apparent even in his splendid essay on Milton, one of the most profound, brilliant, and philosophical dissertations in the English language. Dr. Johnson, while he had paid a just homage to the transcendent genius of the great poet and the charms of his verse, had allowed his party feelings and bigotry to blind him to all that was pure and exalted in Milton's character. Channing, in his vindication, pointed out how Johnson, with all his strength of thought and reverence for virtue and religion, his vigorous logic, and practical wisdom, wanted enthusiasm and lofty sentiment. Hence, his passions engaged him in the unworthy task of obscuring the brighter glory of one of the best and most virtuous of men. But the American champion of the illustrious bard fails to remark that Milton was also two centuries in advance of the age in which he lived, in his appreciation of the share which the study of nature ought to hold in the training of the youthful mind. Of Milton's scheme for enlarging the ordinary system of teaching, proposed after he had himself been practically engaged in the task as a schoolmaster, the lexicographer spoke, as might have been anticipated, in terms of disparagement bordering on contempt. He treated Milton, in fact, as a mere empiric and visionary projector, observing that "it was his purpose to teach boys something more solid than the common literature of schools, by reading those authors that treat of physical subjects."—"The poet Cowley had formed a similar plan in his imaginary college; but the knowledge of external nature, and the

sciences which that knowledge requires, are not the great or the frequent business of the human mind: and we ought not" he adds, "to turn off attention from life to nature, as if we were placed here to watch the growth of plants, or the motions of the stars."

That a violent shock had been given in the sixteenth century to certain time-honored dogmas, by what is here slightingly called "watching the motions of the stars," was an historical fact with which Johnson was of course familiar; but if it had been adduced to prove that they who exercise their reasoning powers, in interpreting the great book of nature, are constantly arriving at new truths, and occasionally required to modify preconceived opinions, or that when habitually engaged in such discipline, they often acquire independent habits of thought, applicable to other departments of human learning, such arguments would by no means have propitiated the critic, or have induced him to moderate his disapprobation of the proposed innovations. In the mind of Johnson there was a leaning to superstition, and no one was more content to leave the pupil to tread forever in beaten paths, and to cherish extreme reverence for authority, for which end the whole system then in vogue in the English schools and colleges was admirably conceived. For it confined the studies of young men, up to the age of twenty-two, as far as possible to the non-progressive departments of knowledge, to the ancient models of classical excellence, whether in poetry or prose, to theological treatises, to the history and philosophy of the ancients rather than the moderns, and to pure mathematics rather than their application to physics. No modern writer was more free from fear of inquiry, more anxious to teach the millions to think and reason for themselves, no one ever looked forward more enthusiastically to the future growth and development of the human mind, than Channing. If his own education had not been cast in an antique mold, he would have held up Milton as a model for imitation, not only for his love of classical lore and poetry, but for his wish to cultivate a knowledge of the works of nature.

Certainly no people ever started with brighter prospects of uniting the promotion of both these departments, than the people

of New England at this moment. Of the free schools which they have founded, and the plan of education adopted by them for children of all sects and stations in society, they feel justly proud, for it is the most original thing which America has yet produced. The causes of their extraordinary success and recent progress, well deserve more attention than they have usually received from foreigners, especially as it seems singular at first sight, and almost paradoxical, that a commonwealth founded by the Puritans, whom we are accustomed to regard as the enemies of polite literature and science, should now take so prominent a lead as the patrons of both; or that a sect which was so prone to bibliolatry that they took their pattern and model of civil government, and even their judicial code, from the Old Testament, who carried their theory of the union of Church and State so far as to refuse the civil franchise to all who were not in full communion with their Church, and who persecuted for a time some non-conformists, even to the death, should nevertheless have set an example to the world of religious toleration, and have been the first to establish schools for popular education open to the children of all denominations—Romanist, Protestant, and Jew.

If any one entertains a doubt that the peculiar character stamped upon the present generation of New Englanders, in relation to religious and political affairs, is derived directly and indisputably from their Puritan ancestors, let them refer to the history of Massachusetts. According to the calculation of Bancroft, the first Puritan settlers of New England are the parents of one-third of the whole white population of the United States. Within the first fifteen years (and there never was afterward any considerable increase from England) there came over 21,200 persons, or 4000 families. Their descendants, he says, are now (1840) not far from 4,000,000. Each family has multiplied on the average to 1000 souls, and they have carried to New York and Ohio, where they constitute half the population, the Puritan system of free schools, which they established from the beginning. When we recollect that the population of all England is computed to have scarcely exceeded five millions when the chief body of the Puritans first emigrated to the New World, we

may look upon the present descendants of the first colonists as constituting a nation hardly inferior in numbers to what England itself was only two centuries before our times. The development, therefore, of the present inhabitants from a small original stock has been so rapid, and the intermediate generations so few, that we must be quite prepared to discover in the founders of the colony of the seventeenth century, the germ of all the wonderful results which have since so rapidly unfolded themselves.

Nor is this difficult. In the first place, before the great civil war broke out in England, when the principal emigration took place to Massachusetts, the Puritans were by no means an illiterate or uncultivated sect. They reckoned in their ranks a considerable number of men of good station and family, who had received the best education which the schools and universities then afforded. Some of the most influential of the early New England divines, such as Cotton Mather, were good scholars, and have left writings which display much reading and an acquaintance with the Greek and Latin languages. Milton's "Paradise Lost" usually accompanied the Bible into the log-houses of the early settlers, and with the "Paradise Lost" the minor poems of the same author were commonly associated.

The Puritans who first went into exile, after enduring much oppression in their native country, were men who were ready to brave the wilderness rather than profess doctrines or conform to a ritual which they abhorred. They were a pure and conscientious body. They might be ignorant or fanatical, but they were at least sincere, and no hypocrites had as yet been tempted to join them for the sake of worldly promotion, as happened at a later period, when Puritanism in the mother country had become dominant in the state. Full of faith, and believing that their religious tenets must be strengthened by free investigation, they held that the study and interpretation of the Scriptures should not be the monopoly of a particular order of men, but that every layman was bound to search them for himself. Hence they were anxious to have all their children taught to read. So early as the year 1647, they instituted common schools, the law declaring "that all the brethren shall teach their children and apprentices

to read, and that every township of fifty householders shall appoint one to teach all the children."*

Very different was the state of things in the contemporary colony of Virginia, to which the Cavaliers and the members of the Established Church were thronging. Even fifteen or twenty years later, Sir William Berkeley, who was governor of Virginia for nearly forty years, and was one of the best of the colonial rulers, spoke thus, in the full sincerity of his heart, of his own province, in a letter written after the restoration of Charles II. : —"I thank God there are no free schools or printing, and I hope we shall not have them these hundred years. For learning has brought heresy and disobedience and sects into the world, and printing has divulged them, and libels against the best government. God keep us from both."†

Sir William Berkeley was simply expressing here, in plain terms, the chief motives which still continue to defeat or retard the cause of popular education in some parts of the United States and in many countries of Europe, England not excepted—a dread of political change while the people remain in ignorance, and a fear of removing that ignorance, lest it should bring on changes of religious opinion. The New Englanders were from the beginning so republican in spirit, that they were not likely to share Governor Berkeley's apprehensions of a growing dislike to "the best of governments," as he termed the political maxims of the Stuarts ; and if, for a time, they cherished hopes of preserving uniformity of religious opinion, and even persecuted some who would not conform to their views, their intolerance was of short duration, and soon gave way to those enlightened views of civil and religious freedom which they had always professed, even when they failed to carry them into practice.

If we contrast the principles before alluded to of the leading men in Massachusetts with those of the more southern settlers, in the early part of the seventeenth century, we learn without surprise that at a time when there was not one bookseller's shop in Virginia and no printing presses, there were several in Boston,

* Bancroft, vol. i. p. 458.

† Chalmers, cited by Graham, Hist. of U. S., vol. i. p. 103.

with no less than five printing-offices, a fact which reflects the more credit on the Puritans, because at the same period (1724) there were no less than thirty-four counties in the mother country, Lancashire being one of the number, in which there was no printer.*

When the Pilgrim Fathers were about to sail in the May-flower from Leyden, a solemn fast was held before they embarked, and their pastor, Robinson, gave them a farewell address, in which these memorable words are recorded :—

"I charge you, before God and his blessed angels, that you follow me no further than you have seen me follow the Lord Jesus Christ. The Lord has more truth yet to break forth out of his holy word. For my part, I can not sufficiently bewail the condition of the reformed churches, who are come to a period in religion, and will go at present no further than the instruments of their first reformation. The Lutherans can not be drawn to go beyond what Luther saw. Whatever part of His will our good God has imparted and revealed unto Calvin, they will die rather than embrace it. And the Calvinists, you see, stick fast where they were left by that great man of God, who yet saw not all things. This is a misery much to be lamented ; for, though they were burning and shining lights in their times, yet they penetrated not into the whole counsel of God : but, were they now living, they would be as willing to embrace further light as that which they first received. I beseech you to remember it ; it is an article of your church-covenant, that you will be ready to receive whatever truth shall be made known unto you from the written word of God. Remember that and every other article of your most sacred covenant."

It may be said that the spirit of progress, the belief in the future discovery of new truths, and the expansion of Christianity, which breathes through every passage of this memorable discourse, did not characterize the New England Independents any more than the members of other sects. Like the rest, they had embodied their interpretations of Scripture in certain fixed and definite propositions, and were but little disposed to cherish the

* Macaulay, History of England, vol. i. p. 392, who cites Nichols.

doctrine of the gradual development of Christianity. The Romanists had stopped short at the council of Trent, when the decrees of a general council were canonized by the sanction of an infallible Pope. In like manner, almost every Protestant church has acted as if religion ceased to be progressive at the precise moment of time when their own articles of belief were drawn up, after much dispute and difference of opinion.

But the precepts inculcated by Pastor Robinson were delivered to a body of men whose form of ecclesiastical polity was very peculiar; who held that each congregation, each separate society of fellow-worshipers, constituted within themselves a perfect and independent church, whose duty it was to compose for itself and modify at pleasure its rules of scriptural interpretation. In conformity with these ideas, the common law of New England had ruled, that the majority of the pew-holders in each church should retain their property in a meeting-house, and any endowment belonging to it, whatever new opinions they might, in the course of time, choose to adopt. In other words, if, in the lapse of ages, they should deviate from the original standard of faith, they should not suffer the usual penalties of dissent, by being dispossessed of the edifice in which they were accustomed to worship, or of any endowments given or bequeathed for a school-house or the support of a pastor, but should continue to hold them; the minority who still held fast to the original tenets of the sect, having to seek a new place of worship, but being allowed to dispose of their pews, as of every other freehold, if purchasers could be found.

Every year in some parts of New England, where the population is on the increase, the manner in which some one of these new congregations starts into existence may be seen. A few individuals, twenty perhaps, are in the habit of meeting together on the Sabbath in a private dwelling, or in the school-house already built for the children of all denominations in the new village. One of the number offers a prayer, another reads a chapter in the Bible, another a printed sermon, and perhaps a fourth offers remarks, by way of exhortation, to his neighbors. As the population increases, they begin to think of forming them-

selves into a church, and settling a minister. But first they have to agree upon some creed or covenant which is to be the basis of their union. In drawing up this creed they are usually assisted by some neighboring minister, and it is then submitted for approbation to a meeting of all the church members, and is *thoroughly discussed* and altered till it suits the peculiar and prevailing shades of opinion of the assembly. When at length it is assented to, it is submitted to a council of neighboring ministers, who examine into its scriptural basis, and who, according as they approve or disapprove of it, give or withhold "the hand of fellowship."

The next step is to elect a pastor. After hearing several candidates preach, they invite one to remain with them; and, after he has been ordained by the neighboring ministers, agree on the salary to be insured to him, for the collection of which certain members become responsible. It rarely exceeds 700 dollars, and more usually amounts in rural districts to 500 dollars, or 100 guineas annually.

By the Congregationalists, a church is defined to be a company of pious persons, who voluntarily unite together for the worship of God. Each company being self-created, is entirely independent of every other, has the power to elect its own officers, and to admit or exclude members. Each professes to regard creeds and confessions of faith simply as convenient guides in the examination of candidates, not standards of religious truth. They may be the opinions of good and wise men, venerable by their antiquity, but of no binding authority, and are to be measured in each separate church by their conformity with Scripture. As to the union of different churches, it is purely voluntary, and has been compared to a congress of sovereign states, having certain general interests in common, but entirely independent of each other. There are no articles of union; but if any old or new society is thought to depart so widely from the other churches that they can no longer be recognized as Christians, the rest withhold or withdraw their fellowship.

Upon the whole, the separate congregational churches, both in Old and New England, in all above 3000 in number, have

held together more firmly for two centuries, and have deviated far less from the original standard of faith, than might have been expected; although in Massachusetts and some neighboring States, more than a hundred meeting-houses, some of them having endowments belonging to them, have in the course of the last forty years been quietly transferred, by the majority of the pew-holders, to what may be said to constitute new denominations. The change usually takes place when a new minister is inducted. This system of ecclesiastical polity is peculiarly repugnant to the ideas entertained by churchmen in general, whose efforts are almost invariably directed, whether in Protestant or Romanist communities, to inculcate a deep sense of the guilt of schism, and to visit that guilt as far as possible with pecuniary penalties and spiritual outlawry. The original contract is usually based on a tacit assumption that religion is not, like other branches of knowledge, progressive in its nature; and, therefore, instead of leaving the mind unfettered and free to embrace and profess new interpretations, as would be thought desirable where the *works* of God are the subjects of investigation, every precaution is taken to prevent doubt, fluctuation, and change. It is even deemed justifiable to exact early vows and pledges against the teaching of any new doctrines; and if the zealous inquirer should, in the course of years and much reading, catch glimpses of truths not embodied in his creed, nay, the very grounds of which could not be known to him when he entered the church, nor to the original framers of his articles of religion, no provision is made for enabling him to break silence, or openly to declare that he has modified his views. On the contrary, such a step must usually be attended with disgrace, and often with destitution.

Nor does the intensity of this feeling seem by any means to diminish in modern times with the multiplication of new sects. It is even exhibited as strongly in bodies which dissent from old establishments as in those establishments themselves. Wesley, for example, took the utmost care that every Methodist chapel should be so vested in the "General Conference," as to insure the forfeiture of the building to the trustees, if any particular congregation should deviate from his standard of faith, or even

should return to the Church of England, whose doctrines they had never renounced. But the most signal instance of a fixed determination to prevent any one congregation from changing its mind in regard to any dogma or rite, until all the others associated with it are ready to move on in the same direction, has been exemplified in our times by the Free Kirk of Scotland. More than a million of the population suddenly deserted the old establishment, and were compelled to abandon hundreds of ecclesiastical buildings, in which they had worshiped from their childhood. Some of these edifices remained useless for a time, locked up, and no service performed in them, because the minister and nearly all the parishioners had joined in the secession. It was necessary for the separatists to erect 700 or 800 new edifices and school-houses, on which they expended several hundred thousand pounds, having often no small difficulty to obtain new sites for churches, so that their ministers preached for a time, like the Covenanters of old, in the open air. It was under these circumstances, and at the moment of submitting to such sacrifices, that their new ecclesiastical organization was completed, providing that if any one of several hundred congregations should hereafter deviate, in ever so slight a degree, from any one of the numerous articles of faith drawn up nearly three centuries ago, under the sanction of John Knox, or from any one of the rules and forms of church government then enacted, they should be dispossessed of the newly erected building, and all funds thereunto belonging. Had any other contract been proposed, implying the possibility of any future change or improvement in doctrine or ceremony, not a farthing would have been contributed by these zealous Presbyterians; nor have they acted inconsistently, inasmuch as they are fully persuaded that they neither participate in an onward or backward movement, but are simply reverting to that pure and perfect standard of orthodoxy of the middle of the sixteenth century, from which others have so sinfully departed.

It is only in times comparatively modern, that the opinion has gained ground in Europe, and very recently in Scotland, that in the settlement of landed property there should be some limitation of the power of the dead over the living, and that a testator can

not be gifted with such foresight as to enable him to know beforehand in what manner, and subject to what conditions, his wealth may be best distributed among his descendants, several generations hence, for their own benefit or that of the community at large. Whether, in ecclesiastical matters, also, there should not be some means provided of breaking the entail without resorting to what is termed in Scotland "a disruption," so that deviations from theological formularies many centuries old, should not be visited with pecuniary losses or disgrace—whether it be expedient to allow the Romanist or Calvinist, the Swedenborgian or Socinian, and every other sectary to enforce, by the whole power of the wealth he may bequeath to posterity, the teaching of his own favorite dogmas for an indefinite time, and when a large part of the population on whom he originally bestowed his riches have altered their minds, are points on which a gradual change has been taking place in the opinions of not a few of the higher classes at least. Of this no one will doubt who remembers or will refer to the debates in both Houses of the British Parliament in 1844,* and the speeches of eminent statesmen of opposite politics when the Dissenters' Chapel Bill was discussed.

But whatever variety of views there may still be on this subject in Europe, it is now the settled opinion of many of the most thoughtful of the New Englanders, that the assertion of the independence of each separate congregation, was as great a step toward freedom of conscience as all that had been previously gained by Luther's Reformation; and it constitutes one of those characteristics of church government in New England, which, whether approved of or not, can not with propriety be lost sight of, when we endeavor to trace out the sources of the love of progress, which has taken so strong a hold of the public mind in New England, and which has so much facilitated their plan of national education. To show how widely the spirit of their peculiar ecclesiastical system has spread, I may state that even the Roman Catholics have, in different states, and in three or four cases (one of which is still pending, in 1848–9), made an appeal to the courts of law, and endeavored to avail themselves of the

* See the Debates on 7 & 8 Viet., ch. xlv. A.D. 1844.

principle of the Independents, so that the majority of a separate congregation should be entitled to resist the appointment by their bishop of a priest to whom they had strong objections. The courts seem hitherto to have determined that, as the building belonged to the majority of the pew-holders, they might deal with it as they pleased; but they have declined to pronounce any opinion on points of ecclesiastical discipline, leaving the members of each sect free, in this respect, to obey the dictates of their own conscience.

But to exemplify the more regular working of the congregational polity within its own legitimate sphere, I will mention a recent case which came more home to my own scientific pursuits. A young man of superior talent, with whom I was acquainted, who was employed as a geologist in the state survey of Pennsylvania, was desirous of becoming a minister of the Presbyterian Church in that state; but, when examined, previous to ordination, he was unable to give satisfactory answers to questions respecting the plenary inspiration of Scripture, because he considered such a tenet, when applied to the first book of Genesis, inconsistent with discoveries now universally admitted, respecting the high antiquity of the earth, and the existence of living beings on the globe long anterior to man. The rejected candidate, whose orthodoxy on all other points was fully admitted, was then invited by an Independent congregation in New England, to become their pastor; and when he accepted the offer, the other associated churches were called upon to decide whether they would assist in ordaining one who claimed the right to teach freely his own views on the question at issue. The right of the congregation to elect him, whether the other churches approved of the doctrine or not, was conceded; and a strong inclination is always evinced, by the affiliated societies, to come, if possible, to an amicable understanding. Accordingly, a discussion ensued, and is perhaps still going on, whether, consistently with a fair interpretation of Scripture, or with what is essential to the faith of a Christian, the doctrine of complete and immediate inspiration may or may not be left as an open question.

Some of my readers may perhaps exclaim that this incident

proves that the Congregationalists of New England are far behind many orthodox divines of the Church of England, or even the Church of Rome, as shown by Dr. Wiseman's lectures, in the liberality of their opinions on this head, and that the establishment of the true theory of astronomy satisfied the Protestant world, at least, that the Bible was never intended as a revelation of physical science. No doubt it is most true, that within the last forty years many distinguished writers and dignitaries of the English Church have expressed their belief very openly in regard to the earth's antiquity, and the leading truths established by geology. "The Records of Creation," published in 1818, by the present Archbishop of Canterbury (Dr. Sumner), the writings of the present Dean of Westminster (Dr. Buckland), those of the Dean of Llandaff (Dr. Conyeare), and of the Woodwardian Professor of Cambridge (The Rev. A. Sedgwick), and others, might be adduced in confirmation. All of these, indeed, have been cited by the first teachers of geology in America, especially in the "orthodox universities" of New England, as countenancing the adoption of their new theories; and I have often heard scientific men in America express their gratitude to the English Churchmen for the protection which their high authority afforded them against popular prejudices at a critical moment, when many of the State Legislatures were deliberating whether they should or should not appropriate large sums of the public money to the promotion of geological surveys. The point, however, under discussion in the Congregationalist Church, to which I have alluded, is in reality a different one, and of the utmost importance; for it is no less than to determine, not whether a minister may publish books or essays declaratory of his own individual views, respecting the bearing of physical science on certain portions of Scripture, but whether he may, without reproach or charge of indiscretion, freely and candidly expound to all whom he addresses, rich and poor, from the pulpit, those truths on which few well-informed men now any longer entertain a doubt. Until such permission be fairly granted, the initiated may, as we well know, go on for ages embracing one creed, while the multitude holds fast to another, and looks with suspicion and distrust on the phi-

losopher who unreservedly makes known the most legitimate deductions from facts. Such, in truth, is the present condition of things throughout Christendom, the millions being left in the same darkness respecting the antiquity of the globe, and the successive races of animals and plants which inhabited it before the creation of man, as they were in the middle ages; or, rather, each new generation being allowed to grow up with, or derive from Genesis, ideas directly hostile to the conclusions universally received by all who have studied the earth's autobiography. Not merely the multitude, but many of those who are called learned, still continue, while beholding with delight the external beauty of the rocks and mountains, to gaze on them as Virgil's hero admired his shield of divine workmanship, without dreaming of its historical import:—

"Dona parentis
Miratur, rerumque ignarus imagine gaudet."

The extent to which, in Protestant countries, and where there is a free press, opinions universally entertained by the higher classes, may circulate among them in print and may yet remain a sealed book to the million as completely as if they were still in sacerdotal keeping, is such as no one antecedently to experience would have believed possible. The discoveries alluded to are by no means confined to the domain of physical science. I may cite as one remarkable example the detection of the spurious nature of the celebrated verse in the First Epistle of John, chap. v. verse 7, commonly called "the Three Heavenly Witnesses." Luther, in the last edition which he published of the Bible, had expunged this passage as spurious; but, shortly after his death, it was restored by his followers, in deference to popular prepossessions and Trinitarian opinions. Erasmus omitted it in his editions of the New Testament in the years 1516 and 1519; and after it had been excluded by several other eminent critics, Sir Isaac Newton wrote his celebrated dissertation on the subject between the years 1690 and 1700, strengthening the arguments previously adduced against the genuineness of the verse. Finally, Porson published, in 1788 and 1790, his famous letters, by which the question was

forever set at rest. It was admitted that in all the Greek MSS. of the highest antiquity, the disputed passages were wanting, and Porson enumerated a long list of Greek and Latin authors, including the names of many fathers of the Church, who, in their controversies with Arians and Socinians, had not availed themselves of the text in question, although they had cited some of the verses which immediately precede and follow, which lend a comparatively feeble support to their argument.

All who took the lead against the genuineness of the passage, except Sir Isaac Newton, were Trinitarians; but doubtless felt with Porson, that "he does the best service to truth who hinders it from being supported by falsehood." Throughout the controversy, many eminent divines of the Anglican church have distinguished themselves by their scholarship and candor, and it is well known by those who have of late years frequented the literary circles of Rome, that the learned Cardinal Mai was prevented, in 1838, from publishing his edition of the Codex Vaticanus, because he could not obtain leave from the late Pope (Gregory XVI.) to omit the interpolated passages, and had satisfied himself that they were wanting in all the most ancient MSS. at Rome and Paris. The Pontiff refused, because he was bound by the decrees of the Council of Trent, and of a Church pretending to infallibility, which had solemnly sanctioned the Vulgate, and the Cardinal had too much good faith to give the authority of his name to what he regarded as a forgery. In Oxford, in 1819, the verse was not admitted, by the examiners in Divinity, as Scripture warranty for the doctrine of the Trinity; yet, not only is it retained in the English Prayer-Book, in the epistle selected for the first Sunday after Easter, but the Protestant Episcopal Church in America, when finally revising their version of the English Liturgy in 1801, several years after Porson's letters had been published, did not omit the passage, although they had the pruning knife in their hand, and were lopping off several entire services, such as the Commination, Gunpowder Treason, King Charles the Martyr, the Restoration of Charles II., and last, not least, the Athanasian Creed. What is still more remarkable, Protestants of every denomination have

gone on year after year distributing hundreds of thousands of Bibles, not only without striking out this repudiated verse, but without even affixing to it any mark or annotation to show the multitude that it is given up by every one who has the least pretension to scholarship and candor.

> "Let Truth, stern arbitress of all,
> Interpret that original,
> And for presumptuous wrongs atone;—
> Authentic words be given, or none!"

It is from no want of entire sympathy with the sentiment expressed in these lines of Wordsworth, and written by him on a blank leaf of Macpherson's Ossian, that literary or scientific men, whether Protestant or Catholic, European or American, clergy or laity, abstain in general from communicating the results of their scientific or biblical researches to the million, still less from any apprehension that the essential truths of Christianity would suffer the slightest injury, were the new views to be universally known. They hesitate, partly from false notions of expediency, and partly through fear of the prejudices of the vulgar. They dare not speak out, for the same reason that the civil and ecclesiastical rulers of England halted for one hundred and seventy years before they had courage to adopt the reform in the Julian calendar, which Gregory XIII., in accordance with astronomical observations, had effected in 1582.

Hogarth, in his picture of the Election Feast, has introduced a banner carried by one of the crowd, on which was inscribed the motto, "Give us back our eleven days," for he remembered when the angry mob, irritated by the innovation of the new style, went screaming these words through the streets of London.

In like manner, the acknowledged antiquity of Egyptian civilization, or of the solid framework of the globe, with its monuments of many extinct races of living beings, might, if suddenly disclosed to an ignorant people, raise as angry a demand to give them back their old chronology. Hence arises a habit of concealing from the unlettered public discoveries which might, it is thought, perplex them, and unsettle their old opinions. This method of dealing with the most sacred of subjects, may thus be

illustrated:—A few tares have grown up among the wheat; you must not pull them up, or you will loosen the soil and expose the roots of the good grain, and then all may wither: moreover, you must go on sowing the seeds of the same tares in the mind of the rising generation, for you can not open the eyes of the children without undeceiving and alarming their parents. Now the perpetuation of error among the many, is only one part of the mischief of this want of good faith, for it is also an abandonment by the few of the high ground on which their religion ought to stand, namely, its truth. It accustoms the teacher to regard his religion in its relation to the millions as a mere piece of machinery, like a police, for preserving order, or enabling one class of men to govern another.

If such a state of things be unsound and unsatisfactory, it is not so much the clergy who are to blame as the laity; for laymen have more freedom of action, and can with less sacrifice of personal interests take the initiative in a reform. The cure of the evil is obvious; it consists in giving such instruction to the people at large as would make concealment impossible. Whatever is known and intelligible to ordinary capacities in science, especially if contrary to the first and natural impressions derivable from the literal meaning, or ordinary acceptation of the text of Scripture, whether in astronomy, geology, or any other department of knowledge, should be freely communicated to all. Lay teachers, not professionally devoted and pledged to propagate the opinions of particular sects, will do this much more freely than ecclesiastics, and, as a matter of course, in proportion as the standard of public instruction is raised; and no order of men would be such gainers by the measure as the clergy, especially the most able and upright among them. Every normal school, every advance made in the social and intellectual position of the lay teachers, tends to emancipate, not the masses alone, but still more effectually their spiritual guides, and would increase their usefulness in a tenfold degree. That a clergy may be well informed for the age they live in, and may contain among them many learned and good men, while the people remain in darkness, we know from history; for the spiritual instructors may

wish to keep the multitude in ignorance, with a view of maintaining their own power. But no educated people will ever tolerate an idle, illiterate, or stationary priesthood. That this is impossible, the experience of the last quarter of a century in New England has fully proved. In confirmation of this truth, I may appeal to the progress made by the ministers of the Methodist and Baptist churches of late years. Their missionaries found the Congregationalists slumbering in all the security of an old establishment, and soon made numerous converts, besides recruiting their ranks largely from newly arrived emigrants. They were able to send more preachers into the vineyard, because they required at first scarcely any preparation or other qualification than zeal. But no sooner had the children of the first converts been taught in the free schools under an improved system, than the clergy of these very denominations, who had for a time gloried in their ignorance and spoken with contempt of all human knowledge, found it necessary to study for some years in theological seminaries, and attend courses of church history, the Greek, Latin, Hebrew, and German languages, the modern writings of German and other biblical scholars, and every branch of divinity. The Baptist college at Newton has greatly distinguished itself among others, and that of the Methodists at Middletown in Connecticut; while the Independents have their theological college at Andover in Massachusetts, which has acquired much celebrity, and drawn to it pupils from great distances, and of many different denominations.

The large collections of books on divinity which are now seen in the libraries of New England clergy, were almost unknown a quarter of a century ago.

The average pay, also, of the clergy in the rural districts of New England has increased. About the middle of the last century, it was not more than 200 dollars annually, so that they were literally "passing rich with forty pounds a year;" whereas now they usually receive 500 at least, and some in the cities 2000 or 3000 dollars. Nor can there be a doubt that, in proportion as the lay teachers are more liberally remunerated, the scale of income required to command the services of men of

first-rate talent in the clerical profession, must and will be raised.

Already there are many indications in Massachusetts that a demand for higher qualifications in men educated for the pulpit is springing up. It is no bad augury to hear a minister exhort his younger brethren at their ordination not to stand in awe of their congregations, but to remember they have before them sinful men who are to be warned, not critics who are to be propitiated. "Formerly," said Channing, "Felix trembled before Paul; it is now the successor of Paul who trembles:"—a saying which, coming as it did from a powerful and successful preacher, implies that the people are awaking, not that they are growing indifferent about religious matters, but that the day of soporific discourses, full of empty declamation or unmeaning commonplaces, is drawing to a close.

It will be asked, however, even by some who are favorable to popular education, whether the masses can have leisure to profit in after life by such a style of teaching as the government of Massachusetts is now ambitious of affording to the youth of the country, between the ages of four and fourteen. To this I may answer, that in nations less prosperous and progressive it is ascertained that men may provide for all their bodily wants, may feed and clothe themselves, and yet give up one-seventh part of their time, or every Sabbath, to their religious duties. That their religion should consist not merely in the cultivation of a devotional spirit toward their Maker, but also in acquiring pure and lofty conceptions of his attributes—a knowledge of the power and wisdom displayed in his works—an acquaintance with his moral laws—a just sense of their own responsibility, and an exercise of their understandings in appreciating the evidences of their faith, few of my readers will deny. To insure the accomplishment of these objects, a preparatory education in good schools is indispensable. It is not enough to build churches and cathedrals, to endow universities or theological colleges, or to devote a large portion of the national revenues to enable a body of spiritual instructors to discharge, among other ecclesiastical duties, that of preaching good sermons from the pulpit. Their seed may fall

on a soil naturally fertile, but will perish if there has been no previous culture of the ground. At the end of seventy years men of good natural abilities, who have been attentive to their religious observances, have given up ten entire years of their life, a period thrice as long as is required for an academical course of study, and at the close of such a career may, as we know, be ignorant, sensual, and superstitious, and have little love or taste for things intellectual or spiritual.

But granting that time and leisure may be found, it will still be asked whether, if men of the humblest condition be taught to enjoy the poems of Milton and Gray, the romances of Scott, or lectures on literature, astronomy, and botany, or if they read a daily newspaper and often indulge in the stirring excitement of party politics, they will be contented with their situation in life, and submit to hard labor. All apprehension of such consequences is rapidly disappearing in the more advanced states of the American Union. It is acknowledged by the rich that, where the free schools have been most improved, the people are least addicted to intemperance, are more provident, have more respect for property and the laws, are more conservative, and less led away by socialist or other revolutionary doctrines. So far from indolence being the characteristic of the laboring classes, where they are best informed, the New Englanders are rather too much given to overwork both body and brain. They make better pioneers, when roughing it in a log-house in the backwoods, than the uneducated Highlander or Irishman; and the factory girls of Lowell, who publish their "Offering," containing their own original poems and essays, work twelve hours a day, and have not yet petitioned for a ten-hour bill.

In speculating on the probability of the other states in the north, south, and west, some of them differing greatly in the degree of their social advancement, and many of them retarded by negro slavery, adopting readily the example set them by the New Englanders, and establishing free and normal schools, I find that American enthusiasts build their hopes chiefly on that powerful stimulus which they say is offered by their institutions for popular education—a stimulus such as was never experienced

before in any country in the world. This consists not so much in the absence of pauperism, or in the individual liberty enjoyed by every one in civil and religious rights, but in the absence of the influence of family and fortune—the fair field of competition, freely open to all who aspire, however humble, to rise one day to high employments, especially to official or professional posts, whether lay or ecclesiastical, civil or military, requiring early cultivation. Few will realize their ambitious longings; but every parent feels it a duty to provide that his child should not be shut out from all chance of winning some one of the numerous prizes, which are awarded solely on the ground of personal qualifications, not always to the most worthy, but at least without any regard to birth or hereditary wealth. It seems difficult to foresee the limit of taxation which a population, usually very intolerant of direct taxes, will not impose on themselves to secure an object in which they have all so great a stake, nor does any serious obstacle or influence seem likely to oppose their will. There is in no state, for example, any dominant ecclesiastical body sufficiently powerful to thwart the maxims of those statesmen who maintain that, as the people are determined to govern themselves, they must be carefully taught and fitted for self-government, and receive secular instruction in common schools open to all. The Roman Catholic priests, it is true, in the state of New York, where there are now 11,000 schools in a population of two millions and a half, have made some vigorous efforts to get the exclusive management of a portion of the school funds into their own hands, and one, at least, of the Protestant sects has openly avowed its sympathy in the movement. But they have failed from the extreme difficulty of organizing a combined effort, where the leaders of a great variety of rival denominations are jealous of one another; and, fortunately, the clergy are becoming more and more convinced that, where the education of the million has been carried farthest, the people are most regular in their attendance on public worship, most zealous in the defense of their theological opinions, and most liberal in contributing funds for the support of their pastors and the building of churches.

CHAPTER XIII.

Leaving Boston for the South.—Railway Stove.—Fall of Snow.—New Haven, and Visit to Professor Silliman.—New York.—Improvements in the City.—Croton Waterworks.—Fountains.—Recent Conflagration.—New Churches.—Trinity Church.—News from Europe of Converts to Rome.—Reaction against Tractarians.—Electric Telegraph, its Progress in America.—Morse and Wheatstone.—11,000 Schools in New York for Secular Instruction.—Absence of Smoke.—Irish Voters.—Nativism.

Dec. 3. 1845.—Having resolved to devote the next six months of my stay in America to a geological exploration of those parts of the country which I had not yet visited, I left Boston just as the cold weather was setting in, to spend the winter in the south. The thermometer had fallen to 23° F., and on our way to the cars we saw skaters on the ice in the common. Soon after we started, heavy snow began to fall, but in spite of the storm we were carried to Springfield, 100 miles, in five hours. We passed a luggage train with twenty-two loaded cars, rolling past us in the opposite direction, on 100 wheels, including those of the engine and tender. In the English railways, the passengers often suffer much from cold in winter. Here, the stove in the center of the long omnibus is a great luxury, and I saw one traveler after another leave his seat, walk up to it and warm his feet on the fender. As I was standing there, a gentleman gave me the President's speech to read, which, by means of a railway express, had, for the first time, been brought from Washington to Boston, 470 miles, in one day. It was read with interest, as all were speculating on the probability of a war with England about Oregon. While I was indulging my thoughts on the rapid communication of intelligence by newspapers and the speed and safety of railway traveling, a fellow-passenger interrupted my pleasing reveries by telling me I was standing too near the iron stove, which had scorched my clothes and burnt a hole in my great coat, and immediately afterward I learnt at Springfield, that

the cars on the line between that town and Albany, where there is only one track, had run against a luggage train near Chester, and many passengers were injured. Some say that two were killed. According to others, one of the trains was five minutes before its time; but our informant took my thoughts back to England, and English narratives of the like catastrophes by saying, "It has been ascertained that no one was to blame." We had no reason to boast of our speed the next day, for we were twelve hours in going sixty-two miles to New Haven. The delay was caused by ice on the rail, and by our having to wait to let the New York train pass us, there being only one line of rail. A storm in the Sound had occasioned the New York cars to be five hours behind their time. We saw many sleighs dashing past and crossing our road. It was late before we reached the hospitable house of Professor Silliman, who with his son gave me many valuable instructions for my southern tour. Their letters of introduction, however, though most useful, were a small part of the service they did me both in this tour and during my former visit to America. Every where, even in the states most remote from New England, I met with men who, having been the pupils of Professor Silliman, and having listened to his lectures when at college, had invariably imbibed a love for natural history and physical science.

In the morning, when we embarked in the steamer for New York, I was amused at the different aspect of the New Haven scenery from that which I remembered in the autumn of 1841. The East Rock was now covered with snow, all but the bold precipice of columnar basalt. The trees, several of which, especially the willows, still retained many of their leaves, were bent down beneath a weight of ice. I never saw so brilliant a spectacle of the kind, for every bough of the large drooping elms and the smallest twigs of every tree and shrub were hung with transparent icicles, which, in the bright sunshine, reflected the prismatic colors like the cut-glass drops of a chandelier. As we sailed out of the harbor, which was crowded with vessels, we saw all the ropes of their riggings similarly adorned with crystals of ice. A stormy voyage of nine hours carried us through Long Island

Sound, a distance of ninety miles, to New York. It is only three years since we were last in this city, yet in this short interval we see improvements equaling in importance the increase of the population, which now amounts in round numbers to 440,000; New York containing 361,000, and Brooklyn, which is connected with it by a ferry, together with Williamsburg 79,000. Among other novelties since 1841, we observe with pleasure the new fountains in the midst of the city supplied from the Croton waterworks, finer than any which I remember to have seen in the center of a city since I was last in Rome. Two of them are now, in spite of an intense frost, throwing up columns of water more than thirty feet high, one opposite the City Hall, and another in Hudson Square; but I am told that when we return in the summer we shall see many others in action. A work more akin in magnificence to the ancient and modern Roman aqueducts has not been achieved in our times; the water having been brought from the Croton river, a distance of about forty miles, at the expense of about three millions sterling. The health of the city is said to have already gained by greater cleanliness and more wholesome water for drinking; and I hear from an eminent physician that statistical tables show that cases of infantine cholera and some other complaints have sensibly lessened. The water can be carried to the attics of every house, and many are introducing baths and indulging in ornamental fountains in private gardens. The rate of insurance for fire has been lowered; and I could not help reflecting as I looked at the moving water, at a season when every pond is covered with ice, how much more security the city must now enjoy than during the great conflagration in the winter of 1835, when there was such a want of water to supply the engines. Only five months ago (July 19th, 1845), another destructive fire broke out near the battery, and when it was nearly extinguished by the aid of the Croton water, a tremendous explosion of saltpeter killed many of the firemen, and scattered the burning materials to great distances, igniting houses in every direction. A belief that more gunpowder still remained unexploded checked for a time the approach of the firemen, so that a large area was laid waste, and even now some of the ruins are

smoking, there being a smoldering heat in cellars filled with "dry goods." When the citizens of London rejected the splendid plan which Sir Christopher Wren proposed for its restoration, he declared that they had not deserved a fire, but the New Yorkers seem to have taken full advantage of the late catastrophe. As it was the business part of the city which the flames laid in ruins, we could not expect much display of ornamental architecture; but already, before the ashes have done smoking, we see entire streets of substantial houses which have risen to their full height, and the ground has been raised five feet higher than formerly above the river, so as to secure it from inundations, which has so enhanced its value, that many of the sites alone have sold for prices equal to the value of the buildings which once covered them. Among the new edifices, we were shown some which are fire-proof. Unfortunately, many a fine tree has been burned, and they are still standing without their bark, but the weeping willows bordering the river on the Battery have escaped unsinged.

Among the new features of the city we see several fine churches, some built from their foundations, others finished since 1841. The wooden spires of several are elegant, and so solid, as to have all the outward effect of stone. The two most conspicuous of the new edifices are Episcopalian, Trinity and Grace Church. The cost of the former has been chiefly defrayed by funds derived from the rent of houses in New York, bequeathed long since to the Episcopal Church. The expense is said to have equaled that of erecting any four other churches in the city. It is entirely of stone, a fine-grained sandstone of an agreeable light-brown tint. The top of the steeple is 289 feet from the ground. The effect of the Gothic architecture is very fine, and the Episcopalians may now boast that of all the ecclesiastical edifices of this continent, they have erected the most beautiful. Its position is admirably chosen, as it forms a prominent feature in Broadway, the principal street, and in another direction looks down Wall-street, the great center of city business. It is therefore seen from great distances in this atmosphere, so beautifully clear even at this season, when every stove is lighted, and when the ther-

mometer has fallen twenty degrees below the freezing point. Where there is so much bright sunshine and no smoke, an architect may well be inspired with ambition, conscious that the effect of every pillar and other ornament will be fully brought out with their true lights and shades. The style of the exterior of Trinity Church reminds us of some of our old Gothic churches in Lincolnshire and Northamptonshire. The interior is in equally good taste, the middle aisle sixty-five feet high, but the clustered columns will not have so stately an appearance, nor display their true proportions when the wooden pews have been introduced round their base. An attempt was made to dispense with these; but the measure could not be carried: in fact, much as we may admire the architectural beauty of such a cathedral, one can not but feel that such edifices were planned by the genius of other ages, and adapted to a different form of worship. When the forty-five windows of painted glass are finished, and the white-robed choristers are singing the Cathedral service, to be performed here daily, and when the noble organ peals forth its swelling notes to the arched roof, the whole service will remind us of the days of Romanism, rather than seem suitable to the wants of a Protestant congregation. It is not the form of building best fitted for instructing a large audience. To make the whole in keeping, we ought to throw down the pews, and let processions of priests in their robes of crimson, embroidered with gold, preceded by boys swinging censers, and followed by a crowd of admiring devotees, sweep through the spacious nave.

That the whole pomp and splendor of the ancient ceremonial will gradually be restored, with no small portion of its kindred dogmas, is a speculation in which some are said to be actually indulging their thoughts, and is by no means so visionary an idea as half a century ago it might have been thought. In the diocese of New York, the party which has adopted the views commonly called Puseyite, appears to have gone greater lengths than in any part of England. The newspapers published in various parts of the Union bear testimony to a wide extension of the like movement. We read, for example, a statement of a bishop who has ordered the revolving reading-desk of a curate to

be nailed to the wall, that he might be unable to turn with it toward the altar. The offending clergyman has resigned for the sake of peace, and part of his congregation sympathizing in his views have raised for him a sum of 6000 dollars. In another paper I see a letter of remonstrance from a bishop to an Episcopal clergyman, for attending vespers in a Romanist church, and for crossing himself with holy water as he entered. The epistle finishes with an inquiry if it be true that he had purchased several copies of the Ursuline Manual for young persons. The clergyman, in reply, complains of this petty and annoying inquisition into his private affairs, openly avows that he is earnestly examining into the history, character, claims, doctrines, and usages of the Church of Rome, and desirous of becoming practically acquainted with their forms of worship—that when present for this purpose he had thought it right to conform to the usage of the congregation, &c.

It would be easy to multiply anecdotes, and advert to controversial pamphlets, with which the press is teeming, in proof of the lively interest now taken in similar ecclesiastical questions, so that the reader may conceive the sensation just created here by a piece of intelligence which reached New York the very day of our arrival, and is now going the round of the newspapers, namely, the conversion to the Romish Church of the Rev. Mr. Newman, of Oxford. Some of his greatest admirers are put to confusion; others are rejoicing in the hope that the event may prove a warning to many who have departed from the spirit of the Reformation; and a third party, who gave no credit for sincerity to the leaders of a movement which they regarded as retrograde, and who still suspect that they who have joined in it here are actuated by worldly motives, are confessing that they did injustice to the great Oxford tractarian. One of them remarked to me, "We are often told from the pulpit here that we live in an age of skepticism, and that it is the tendency of our times to believe too little rather than too much; and yet Protestants of superior talent are now ready to make these great sacrifices for the sake of returning to the faith of Rome!" I might have replied, that reaction seems to be almost as much a princi-

ple of the moral as of the material world, and that we know, from the posthumous writings of one who had lived on intimate terms with the originators of the Tractarian movement in Oxford, that a recoil from doubts derived from the study of the German rationalists, led directly to their departure in an opposite direction. "They flung themselves," says Blanco White, writing in 1837, "on a phantom which they called Church. Their plan was to stop all inquiry," and "to restore popery, excluding the pope."* Meanwhile, the attempt to revive the credulity of the middle ages, and to resuscitate a belief in all the miracles of mediæval saints, has produced, as might naturally have been expected, another reaction, giving strength to a party called the anti-supernaturalists, who entirely reject all the historical evidence in favor of the Scripture miracles. Their leader in New England, Mr. Theodore Parker, is the author of a work of great erudition, originality, and earnestness (lately reprinted in England), in which, while retaining a belief in the Divine origin of Christianity, and the binding nature of its moral code, he abandons the greater part of the evidences on which its truth has hitherto been considered to repose. I heard this author, during my late stay in Boston, preach to a congregation respectable for its numbers and station.

Next to the new churches and fountains, the most striking change observable in the streets of New York since 1841, is the introduction of the electric telegraph, the posts of which, about 30 feet high and 100 yards apart, traverse Broadway, and are certainly not ornamental. Occasionally, where the trees interfere, the wires are made to cross the street diagonally. The successful exertions made to render this mode of communication popular, and so to cheapen it as to bring the advantages of it within the reach of the largest possible number of merchants, newspaper editors, and private individuals, is characteristic of the country. There is a general desire evinced of overcoming space, which seems to inspire all their exertions for extending and improving railways, lines of steam navigation, and these telegraphs. Agriculturists and mercantile men in remote places, are eager to know

* Life of J. Blanco White, vol. ii. p. 355, and vol. iii. p. 106.

every where, on the very day of the arrival of an Atlantic mail steamer, the prices of grain, cotton, and other articles in the European markets, so that they may speculate on equal terms with the citizens of Boston and New York. The politician, who is ambitious, not only of retaining all the states of the Union in one powerful confederation, but of comprising the whole continent under one empire, hails the new invention with delight, and foresees at once its important consequences. Mr. Winthrop well knew the temper of the people whom he addressed, when he congratulated a large meeting, that they might now send intelligence from one end of the Union to the other with the rapidity of thought, and that they had realized the promise of the King of the Fairies, that he would "put a girdle round about the earth in forty minutes." Already many paragraphs in the newspapers are headed, "Received by lightning, printed by steam," and all seem heartily to welcome the discovery as an instrument of progress. When promoting such works, they may exclaim, without boastfulness—

"These are imperial arts, and worthy kings."

After my return from America, I learned that the length of line completed in 1846, amounted to above 1600 miles, and in 1848 there were more than 5000 miles of wire laid down. In that year one of my English friends sent a message by telegraph to Liverpool, in September, which reached Boston by mail steamer, viâ Halifax, in twelve days, and was sent on immediately by electric telegraph to New Orleans, in one day, the answer returning to Boston the day after. Three days were then lost in waiting for the steam-packet, which conveyed the message back to England in twelve days; so that the reply reached London on the twenty-ninth day from the sending of the question, the whole distance being more than 10,000 miles, which had been traversed at an average rate exceeding 350 miles a day.

It is satisfactory to learn that the telegraph, although so often passing through a wild country, in some places anticipating even the railway, seems never yet to have been injured by the lovers of mischief. The wires have also been often struck by light-

ning, so frequent and vivid in this climate, without serious derangement of the delicate machinery. The telegraph generally in use is the patent of Mr. Morse, whose invention combines the power of printing a message simultaneously with its transmission. As the magnetic force becomes extremely feeble when conducted through a great length of wire, Morse employs it simply to make a needle vibrate, and so open and close the galvanic circuit placed in each office, where a local battery is set in motion, which works the printing machine. The long wires, therefore, may be compared to slender trains of gunpowder, which are made to fire a distant cannon or mine. It is not the battery in Philadelphia which works the instrument in Washington, but a battery in the Washington office. This contrivance is obviously nothing more than a new adaptation of the method specified by Mr. Wheatstone, in his patent of June, 1837, for ringing an alarum bell in each station by means of a local battery, of which I saw him exhibit experiments in 1837.

In September of the same year Mr. Morse invented an ingenious mode of printing messages, by causing an endless scroll of paper to roll off one cylinder on to another by means of clockwork, the paper being made to pass under a steel pen, which is moved by electro-magnetism.

An agent of Mr. Morse explained to me the manner in which the steel pen was made to indent the paper, which is not pierced, but appears as if it had been pressed on by a blunted point, the under surface being raised as in books printed for the blind. If the contact of the pen be continued instead of making a dot, it produces a short or a long line, according to the time of contact. The following is a specimen :—

— .... . . — . .. — ... .. __ .— __. —. . — .. ...
T h e E l e c t r o M a g n e t i c

— . — . __. . .. .— ....
T e l e g r a p h.

In the latest improvements of the telegraph in England, the magnetic force has been so multiplied by means of several thousand coils of wire, that they can send it direct, so as to move the

needle at great distances without the aid of local batteries. The use, however, of this instrument has been comparatively small in Great Britain, the cost of messages being four times as great as in the United States.

The population of the State of New York amounts, in the present year (1845) to 2,604,495 souls. Of this number as we learn by the report of the government inspector of schools, no less than 807,200 children, forming almost one-third of the inhabitants, have received the benefit of instruction either for the whole or part of the year. Of these, 31,240 attended private schools, and 742,433 the common or public schools of the state. We are also informed in the same official document, that the number of public schools is now 11,003. The whole amount of money received by the school trustees during the year for teachers' wages, and district libraries, was 1,191,697 dollars, equal to about 250,000*l.* This sum has been raised chiefly by rates, and about one-third of it from the revenue of the school fund, which produces a yearly income of 375,387 dollars. The teachers in the common schools, both male and female, are boarded at the public expense, and, in addition to their board, receive the following salaries :—Male teachers, during the winter term, 14 dollars, 16 cents ; and during the summer term, 15 dollars, 77 cents per month, equal to about 50*l.* a year. Female teachers, 7 dollars, 37 cents in the winter term, and 6 dollars, 2 cents in the summer term. In some counties, however, the average is stated to be as high as 20, or even 26 dollars per month for the male teachers, and from 9 to 11 for the female. There are also district libraries in connection with most of the schools.

All these 11,000 schools have been organized on what has been styled in England, even by respectable members in the House of Commons, the infidel or godless plan, which generally means nothing more than that they are not under the management of the clergy. The Roman Catholic bishops and priests command a vast number of votes at the elections in New York, yet they failed, in 1842, to get into their exclusive control that part of the public school money which might fairly be considered

as applicable to the teaching of children of their own denomination. Their efforts, however, though fortunately defeated, were attended by some beneficial results. It is obviously the duty of every government which establishes a national system of secular education, to see that no books are used in the schools, containing sectarian views, or in which the peculiar opinions of any sect are treated with marked contempt. The Catholics complained that some of the works put into the hands of children, especially those relating to English history, were written with a strong Protestant bias, and that, while the superstitions of popery and the bigotry of Bloody Mary were pointedly dwelt upon, the persecutions endured by Romanists at the hands of Protestant rulers were overlooked, or slightly glanced at. The expunging of such passages, both in the State of New York and in New England, must have a wholesome tendency to lessen sectarian bitterness, which, if imbibed at an early age, is so difficult to eradicate; and children thus educated will grow up less prejudiced, and more truly Christian in spirit, than if the Romish or any other clergy had been permitted to obtain the sole and separate training of their minds.

I have often mentioned the absence of smoke as a striking and enviable peculiarity of the Atlantic cities. For my own part, I never found the heat of a well-managed stove oppressive, when vessels of water were placed over it for moistening the air by free evaporation; and the anthracite coal burns brightly in open grates. Even in a moral point of view, I regard freedom from smoke as a positive national gain, for it causes the richer and more educated inhabitants to reside in cities by the side of their poorer neighbors during a larger part of the year, which they would not do if the air and the houses were as much soiled by smoke and soot as Manchester, Birmingham, Leeds, or Sheffield. Here the dress and furniture last longer and look less dingy, flowers and shrubs can be cultivated in town gardens, and all who can afford to move are not driven into the country or some distant suburb. The formation of libraries and scientific and literary institutions, museums, and lectures, and the daily intercourse between the different orders of society—in a word, all

that can advance and refine the mind and taste of a great population, are facilitated by this contact of the rich and poor. In addition, therefore, to the importance given to the middle and lower classes by the political institutions of America, I can not but think it was a fortunate geological arrangement for the civilization of the cities first founded on this continent, that the anthracitic coal-fields were all placed on the eastern side of the Alleghany mountains, and all the bituminous coal-fields on their western side.

One day, when we were dining at the great table of the Carlton Hotel, one of the largest and most fashionable establishments of the kind in New York, we were informed by an American friend, that a young man and woman sitting opposite to us were well known to him as work-people from a factory near Boston. They scarcely spoke a word, but were conforming carefully to the conventional manners of those around them.

Before we left New York, we witnessed an unforeseen effect of the abundance of waste water recently poured into the city through the new Croton aqueduct. In the lower streets near the river the water in the open gutters had frozen in the course of the night, and, next morning, the usual channels being blocked up with ice, a stream poured down the middle of the street, and was in its turn frozen there, so that when I returned one night from a party, I wished I had been provided with skates, so continuous was the sheet of ice. Then came a thaw, and the water of the melted ice poured into the lower stories of many houses. The authorities are taking active measures to provide in future against the recurrence of this evil.

I suggested to one of my friends here that they had omitted, among their numerous improvements, to exclude the pigs from the streets. "It is not possible," said he, "for they all have votes; I mean their Irish owners have, and they turn the scale in the elections for mayor and other city officers. If we must have a war," he added, "about Oregon, it will at least be attended with one blessing—the stopping of this incessant influx of hordes of ignorant adventurers, who pour in and bear down our native population. Whether they call themselves 'the true

sons of Erin,' or the 'noble sons of Germany,' they are the dupes and tools of our demagogues." He then told me that in the last presidential election he had been an inspector, and had rejected many fraudulent votes of newly arrived emigrants, brought to the poll without letters of naturalization, and he had no doubt that some other inspectors had been less scrupulous when the voters were of their own political party. "But for the foreign vote," he affirmed, "Clay would have been elected." "Have you then joined the native American party?" "No; because, by separating from the Whigs, they have weakened the good cause, and nativism being chiefly anti-Irish, too often degenerates into religious bigotry, or into a mere anti-popery faction."

CHAPTER XIV.

New York to Philadelphia.—Scenery in New Jersey.—War about Oregon.—Protectionist Theories.—Income Tax and Repudiation.—Recriminations against British Aggrandizement.—Irish Quarter and fraudulent Votes.—Washington.—Congress and Annexation of Texas.—General Cass for War.—Winthrop for Arbitration.—Inflated Eloquence.—Supreme Court.—Slavery in District of Columbia.—Museum, Collection of Corals.—Sculpture from Palenque.—Conversations with Mr. Fox.—A Residence at Washington not favorable to a just Estimate of the United States.—False Position of Foreign Diplomatists.

Dec. 9, 1845.—Left New York for Philadelphia by railway. When crossing the ferry to New Jersey, saw Long Island and Staten Island covered with snow. Between New York and Newark, New Jersey, there is a deep cutting through a basaltic or greenstone rock, a continuation of the mass which forms the columnar precipices, called the Palisades, on the Hudson river, above New York. From the jagged face of the cliffs in this cutting, were hanging some of the largest icicles I ever beheld, reminding me of huge stalactites pendent from the roofs of limestone caverns in Europe.

In New Jersey we passed over a gently undulating surface of country, formed of red marl and sandstone, resembling in appearance, and of about the same geological age, as the new red sandstone (trias) of England. The soil in the fields is of a similar red color, and all signs of recent clearings, such as the stumps of trees, have nearly disappeared. The copses, formed of a second growth of wood, and the style of the fences round the fields, gave an English aspect to the country. We went by Newark, Elizabethtown, Princeton, Trenton, Bordentown, and Burlington. In some of these places, as at Elizabethtown, houses and churches have grown up round the railway; and we passed through the middle of Burlington, a great source of convenience to the natives, and of amusement to the passengers, but implying a slow rate of traveling. Hereafter, to enable express trains to go at full speed from north to south, there must be branch lines outside the towns.

As we passed Burlington, a fellow passenger told us that in an Episcopalian college established there, called St. Mary's Hall, were a hundred young girls, whom he called "the holy innocents," assembled from every part of the Union. Eighteen of them had, in September last, taken their degrees in arts, receiving, from the hands of the Bishop of New Jersey, diplomas, headed by an engraving of the Holy Virgin and Child, and issued "in the name of the Father, Son, and Holy Ghost." The session had ended with the ceremony of laying and consecrating the corner-stone of "the chapel of the Holy Innocents for the use of the scholars of St. Mary's Hall."

Whether we took up a newspaper, or listened to conversation in the cars, we found that the Oregon question, and a rupture with England, were the all-engrossing topic of political speculation. The democratic party are evidently intoxicated with their success in having achieved the annexation of Texas, and are bent on future schemes of territorial aggrandizement. Some talk of gaining the whole of Oregon, others all Mexico. I heard one fellow-traveler say modestly, "We are going on too fast; but Mexico must in time be ours." On arriving at Philadelphia, I found some of the daily journals written in a tone well-fitted to create a war-panic, counting on the aid of France in the event of a struggle with Great Britain; boasting that if all the eastern cities were laid in ashes by an English fleet, they would rebuild them in five years, and extinguish all the debts caused by the war in thirty years; whereas England, borrowing as in the last war many hundred millions sterling, must become bankrupt or permanently crippled with taxation. I asked an acquaintance, whether the editor of such articles secretly wished for war, or wanted to frighten his readers into a pacific policy. "He has lately gone over," said he, "to the protectionist party. Having made large purchases of shares in an iron company, and fearing that, should peace continue, the free-traders would lower the tariff, he patriotically hopes for a war with England to enable him to make a fortune. He is one of those philanthropic monopolists who would have joined in a toast given some years ago at a public dinner by one of our merchants, 'May the wants of all

nations increase, and may they be supplied by Pennsylvania.'" "But will his war dreams be realized, think you?" "Probably not; yet the mere anticipation of such a contingency is doing mischief, checking commercial enterprise, causing our state bonds to fall in value, and awakening evil passions. You will scarcely believe that I have heard men of respectable standing in the world declare, that if a war breaks out, we shall at least be able to sponge out our state debt!"

I found that the income tax laid on to pay the interest of this debt, is weighing heavily on Pennsylvania, and many a citizen is casting a wistful glance across the Delaware, at the untaxed fields and mansions of New Jersey. Some manage to evade half their burdens by taking houses in that state, and resorting in the winter season to Philadelphia for the sake of society. One of the Philadelphians assured me, that he and others paid sixteen per cent. on their income for state taxes; and after honestly responding to all the inquisitorial demands of the collectors, they had the mortification of thinking that men who are less conscientious escape half the impost. "Capital," he said, "is deserting this city, and some thriving store-keepers, whom you knew here in 1842, have transferred their business to New York. In your 'Travels in America,' you were far too indulgent to the Pennsylvanian Whigs, who promoted the outlay of government money on public works, which has been our ruin. The wealthy German farmers and democrats opposed that expenditure; and it is not German ignorance, as some Whigs pretend, which has entailed debt and disgrace on this state, but the extravagance of the influential merchants, who were chiefly Whigs. You see by the papers that the county of Lancaster, is 50,000 dollars in arrear in the payment of state taxes, and the punishment inflicted by government is to withhold the school-money from these defaulters, thereby prolonging the evil, if it be ignorance which has dulled their moral sense."

The reluctance to resort to coercive measures, on the part of the men in power, for fear of endangering their popularity, is striking; and John Bull would smile at a circular just issued and addressed by the state treasurer to counties, some of which

are three years in arrear. He praises others for their cheerful promptness in bearing their fair share of the public liabilities, and exhorts the rest to follow their good example, for the honor and credit of the Commonwealth. The necessity of compulsory measures is gently hinted at as a possible contingency, should they continue to be defaulters. As a proof, however, that more cogent methods of persuasion are sometimes resorted to, I see advertisements of the sale of city property for the discharge of taxes; and it is fair to presume, that patriotic exhortations have not always been without effect, or they would be thought too ridiculous to be employed.

I observed to a friend, that when I left the New Englanders, they were decidedly averse to war about Oregon. "Yes," he rejoined, "but they are equally against free trade; whereas, the people in the West, who are talking so big about fighting for Oregon, are in favor of a low tariff and more trade with England, which would make war impossible. Which of these two, think you, is practically the peace party?"

In the leading articles of several of the papers, I read some spirited recriminations in answer to English censures on the annexation of Texas. Its independence, they say, had been acknowledged by Great Britain, and its inhabitants had voluntarily joined the Union. Some journals talk of following "the classical example of the mother-country," and allude to the conquest of Sinde, and the intended "annexation of Borneo." A passage is also cited from a recent article in one of the leading London journals, to the following effect:—"That as the Punjâb must eventually be ours, the sooner we take possession of it the better, and the less blood and treasure will be spent in saving from anarchy the richest part of India." But it is easier thus to recriminate than to reply to the admirable protest published in the beginning of the present year (January, 1845), by a convention of delegates from various and opposite political parties in Massachusetts, which set forth, in strong terms, the unjustifiable manner in which Texas was originally filched from Mexico, and the tendency of such annexation to extend and uphold slavery, and "probably to lead to a Mexican war."

During our stay in Philadelphia, we heard much regret expressed at the establishment of what is called here an Irish quarter, entailing, for the first time, the necessity of keeping up a more expensive police. In the riots of May 6, 1844, many lives were lost, and a party has been formed of native Americans to resist what they call "the papal garrison." Although much sectarian feeling, mixed with the prejudice of race, may have been betrayed against the Irish Romanists, I find it impossible not to sympathize with the indignation cherished here in regard to the interference of aliens with the elections, and the danger which threatens the liberties of the country from fraudulent voting. Originally a residence of five years was required to confer the electoral franchise on a new settler, and the time did not begin to count till after a regular notification of his intention to settle and acquire the rights of citizenship, accompanied by forswearing his allegiance to any other sovereignty. The federalists imprudently extended the term to sixteen years, in the presidentship of John Adams, which excluded more than half of the population in some newly peopled districts. The original term of five years after registration was again restored in Jefferson's presidentship, and continued till the contest between John Quincy Adams and Jackson, when Mr. Buchanan carried his proposition that, instead of registration, two witnesses might depose on parole that the candidate for naturalization had resided five years. This regulation has led to much fraud and perjury; and cases so flagrant have occurred, that judges have been cashiered for conniving at them. The same rules, however, are not binding in all state elections, for in Virginia, at present, the right of citizenship demands a residence of seven years, while in Michigan, new comers can vote two years after their arrival.

How many of the stories related of fraudulent voting may be true, I can not pretend to decide; but I was amused at their number and variety. It came out, I am told, in evidence on a late trial, that convicts had been carried to the poll at New York, and then taken back to prison; and that the dexterity of those who manage the Irish vote often consists in making Paddy believe that he is really entitled to the franchise. One of these dupes

having voted several times over for one candidate, was at length objected to, and observed with *naïveté*, "that it was hard that his vote should at last be challenged, when so many inspectors had taken it before that same day." An emigrant ship arrived at Newcastle, on the Delaware, in the heat of an election for governor; the Irish emigrants were asked if they would support the democratic candidate. "We are all for the opposition," they replied; and the ingenuity of the canvasser was taxed to make them comprehend that the Ins in America, corresponded in their politics with the Outs in Great Britain.

Such anecdotes prove indisputably that the purity of the elections is at least impeached, and it must also be borne in mind that the system of ballot precludes all scrutiny after the election is over.

Dec. 13. *Washington.*—Went into the House of Representatives; the front seats in the gallery are reserved for ladies. We found the member for Connecticut, Mr. Rockwell, on his legs, delivering what seemed to me an admirable speech against the annexation of Texas, especially that part of its new constitution which prohibited the legislature from taking steps toward the future abolition of slavery. Some of the representatives were talking, others writing, none listening. The question was evidently treated as one gone by—mere matter of history, which the course of events had consigned to the vault of all the Capulets. Nevertheless, a feeling of irritation and deep disgust is pervading the minds of the anti-slavery party at this sudden accession of new territory, open to a slave population. A powerful reaction has begun to display itself, so that the incorporation of Texas into the Union may eventually be attended with consequences most favorable to the good cause, rousing the whole north to make a stand against the future extension of slavery. Mr. Winthrop has hailed this more hopeful prospect in the happiest strain of eloquence, addressing "the lone star of Texas," as it was called, in the words of Milton:—

> "Fairest of stars, *last in the train of night*,
> If rather thou belong'st not to the dawn."

Crossing the Rotunda, we passed into the Senate, and heard General Cass, of Michigan, delivering a set speech on the Oregon

question. The recent acquisition of Texas, which we had heard condemned in the other house as a foul blot on their national policy, was boasted of by him as a glorious triumph of freedom. He drew an animated picture of the aggrandizing spirit of Great Britain with her 150 millions of subjects, spoke of her arrogance and pride, the certainty of a war, if they wished to maintain their just rights, and the necessity of an immediate armament.

"Great Britain," he said, "might be willing to submit the Oregon question to arbitration, but the crowned heads, whom she would propose as arbiters, would not be impartial, for they would cherish anti-republican feelings." I thought the style of this oration better than its spirit, and it was listened to with attention; but in spite of the stirring nature of the theme, none of the senators betrayed any emotion.

When he sat down, others followed, some of whom read extracts from the recently delivered speeches of Sir Robert Peel and Lord John Russell on the Oregon affair, commenting freely and fairly upon them, and pointing out that there was nothing in the tone of the British Government, nor in the nature of their demands, which closed the door against an amicable adjustment. I came away from this debate much struck with the singular posture of affairs; for the executive and its functionaries seem to be doing their worst to inflame popular passions, while the legislature, chosen by universal suffrage, is comparatively calm, and exhibits that sense of a dangerous responsibility, which a president and his cabinet might rather have been expected to display.

In reference to one of the arguments in General Cass's speech, Mr. Winthrop soon afterward moved in the House of Representatives (Dec. 19, 1845), "That arbitration does not necessarily involve a reference to crowned heads; and if a jealousy of such a reference is entertained in any quarter, a commission of able and dispassionate citizens, either from the two countries concerned, or from the world at large, offers itself as an obvious and unobjectionable alternative."

A similar proposition emanated simultaneously, and without concert, from the English Cabinet, showing that they were regardless of precedents, and relied on the justice of their cause.

Although it was declined, the mere fact of a great nation having waived all punctilious etiquette, and offered to settle a point at issue by referring the question to private citizens of high character and learned in international law, proves that the world is advancing in civilization, and that higher principles of morality are beginning to gain ground in the intercourse between nations. "All who ought to govern," said a member of Congress to me, "are of one mind as to Lord Aberdeen's overture; but they who do govern here, will never submit to arbitration."

The Senate consists at present of fifty-nine members, and will soon be augmented by two from Texas and two from Iowa, the Union consisting now of twenty-seven states, with a population of about twenty millions.

The appearance of the members of the House of Representatives is gentlemanlike, although I doubt not that the scenes of violence and want of decorum described by many travelers, are correct pictures of what they witnessed. In this nation of readers they are so sensitive to foreign criticism, that amendment may be confidently looked for. At this moment, the papers, by way of retaliation, are amusing their readers with extracts from a debate in the Canada House of Assembly. The following may serve as an example:—"Our Canadian friends occasionally read us a lecture on courtesy and order, we therefore cite from a report of their legislative proceedings, what we presume they intend as a model for our imitation. Mr. De B. appealed to the chair to stop the member for Quebec, and threatened if he was not called to order, that he must go over and pull his nose; at which Mr. A. rejoined, 'Come and do it, you scoundrel!'" Another example of recrimination that I have lately seen, consisted in placing in two parallel columns, first an extract from the leading article of the London Times, rating the Americans in good set terms for their rudeness to each other in debate, and coarse abuse of England; and, secondly, an account given by the same journal of a disorderly discussion in the House of Commons on an Irish question, in which, among other incidents, a young member of the aristocracy (intoxicated let us hope) rose in the midst of the hubbub, and imitated the crowing of a cock.

A member of Congress, who frequented, when in London, the gallery of the House of Commons, tells me he was struck with what seemed an affectation of rusticity, members lolling in lounging attitudes on the benches with their hats on, speaking with their hands thrust into their breeches pockets, and other acts, as if in defiance of restraint. The English method of coughing down a troublesome member is often alluded to here, and has, on one occasion, been gravely recommended for adoption, as a parliamentary usage which might advantageously be imitated, rather than the limitation of each speaker to one hour, a rule now in force, which has too often the effect of making each orator think it due to himself to occupy the house for his full term.

It would be impossible to burlesque or caricature the ambitious style of certain members of Congress, especially some who have risen from humble stations, and whose schooling has been in the back-woods. A grave report, drawn up in the present session by a member for Illinois, as chairman of the Post-office Committee, may serve as an example. After speaking of the American republic as "the infant Hercules," and the extension of their imperial dominion over the "northern continent and oriental seas," he exclaims, "the destiny of our nation has now become revealed, and great events, quickening in the womb of time, reflect their clearly-defined shadows into our very eye-balls.

"Oh, why does a cold generation frigidly repel ambrosial gifts like these, or sacrilegiously hesitate to embrace their glowing and resplendent fate?

"Must this backward pull of the government never cease, and the nation tug forever beneath a dead weight, which trips its heels at every stride?"

From the Senate House we went to another part of the Capitol, to hear Mr. Webster plead a cause before the Judges of the Supreme Court. These judges wear black gowns, and are, I believe, the only ones in the United States who have a costume. The point at issue was most clearly stated, namely, whether the city of New York had a legal right to levy a tax of one dollar on every passenger entering that port, who had never before visited any port of the Union. The number of emigrants being

great, no less than 100,000 dollars had been annually raised by this impost, the money being applied chiefly as an hospital fund. It was contended that the Federal Government alone had the right of imposing duties on commerce. in which light this passenger tribute ought to be viewed. The Court, however, ruled otherwise.

It was pointed out to me, as a remarkable proof of the ascendency of the democratic party in the Federal Government for many years past, that only one of all the judges now on the bench had been nominated by the Whigs.

One day, as we were walking down Pennsylvania Avenue with Mr. Winthrop, we met a young negro woman, who came up to him with a countenance full of pleasure, saying it was several years since she had seen him, and greeting him with such an affectionate warmth of expression, that I began to contrast the stiffness and coldness of the Anglo-Saxon manners with the genial flow of feeling of this southern race. My companion explained to me, that she was a very intelligent girl, and was grateful to him for an act of kindness he had once had an opportunity of showing her. I afterward learnt, from some other friends to whom I told this anecdote, that, three years before, Mr. Winthrop and a brother member of Congress from the north had been lodging in the house of this girl's mistress, and hearing that she was sentenced to be whipped for some offense, had both of them protested they would instantly quit the house if the mistress persevered. She had yielded, and at length confessed that she had been giving way to a momentary fit of temper.

Washington is situated in the district of Columbia, comprising an area of 100 square miles, borrowed from the neighboring states to form an independent jurisdiction by itself. Several attempts have been made to declare it free, but hitherto in vain, thanks to the union of the northern democrats and southern slave-owners, aided by the impracticable schemes of the abolitionists.

The view of the city and the river Potomac from the hill on which the Capitol stands is fine; but, in spite of some new public edifices built in a handsome style of Greek architecture, we are struck with the small progress made in three years since we

were last here. The vacant spaces are not filling up with private houses, according to the original plan, so that the would-be metropolis wears still the air of some projector's scheme which has failed. The principal hotels, however, have improved, and we were not annoyed, as when last here, by the odors left in the room by the colored domestics, who had no beds, but slept any where about the stairs or passages, without changing their clothes. With similar habits, in a hot climate, no servants of any race, whether free or slave, African or European, would be endurable.

In the public museum at the Patent Office I was glad to see a fine collection of objects of natural history, brought here by the late Exploring Expedition, commanded by Captain Wilkes. Among other treasures is a splendid series of recent corals, a good description of which, illustrated by plates, will soon be published by Mr. Dana, at the expense of Government. These zoophytes are accompanied by masses of solid limestone, occasionally including shells, recently formed in coral reefs, like those mentioned by Mr. Darwin as occurring in the South Seas, some as hard as marble, others consisting of conglomerates of pebbles and calcareous sand. In several of the specimens I saw the imbedded zoophytes and shells projecting from the weathered surface, as do the petrifactions in many an ancient limestone where they have resisted disintegration more than the matrix. Other fragments were as white and soft as chalk; one in particular, a cubic foot in bulk, brought from one of the Sandwich Islands, might have been mistaken for a piece of Shakspeare's Cliff, near Dover. It reminded me that an English friend, a professor of political economy, met me about fifteen years ago on the beach at Dover, after he had just read my "Principles of Geology," and exclaimed, "Show me masses of pure white rock, like the substance of these cliffs, in the act of growing in the ocean over areas as large as France or England, and I will believe all your theory of modern causes." Since that time we have obtained data for inferring that the growth of corals, and the deposition of chalk-like calcareous mud, is actually going on over much wider areas than the whole of Europe, so that I am now entitled to claim my incredulous friend as a proselyte.

In one of the glass cases of the Museum I saw the huge skull of the *Megatherium*, with the remains of other extinct fossil animals found in Georgia—a splendid donation presented by Mr. Hamilton Couper. In another part of the room were objects of antiquarian interest, and among the rest some sculptured stones from the ruins of Palenque, inscribed with the hieroglyphic or picture-writing of the Aborigines, with which Stephen's lively work on Central America, and the admirable illustrations of Catherwood, had made us familiar. The camp-chest of General Washington, his sword, the uniform worn by him when he resigned his commission, and even his stick, have been treasured up as relics in this national repository. If the proposition lately made in the public journals, to purchase Washington's country residence and negro-houses at Mount Vernon, and to keep them forever in the state in which he left them, should be carried into effect, it would not only be a fit act of hero-worship, but in the course of time this farm would become a curious antiquarian monument, showing to after generations the state of agriculture at the period when the Republic was founded, and how the old Virginian planters and their slaves lived in the eighteenth century.

Before leaving Washington we called, with Mr. Winthrop, at the White House, the residence of the President. A colored servant in livery came to the door, and conducted us to the reception-room, which is well-proportioned and well-furnished, not in sumptuous style, but without any affectation of republican plainness. We were politely received by Mrs. Polk, her husband being engaged on public business. I was afterward introduced to General Scott, to Captain Wilkes, recently returned from his expedition to the South Seas, to Mr. Bancroft, Secretary of the Navy, and called on our minister, Mr. Pakenham, and our old friends, M. and Madame de Gerolt, the Prussian minister and his wife. I also examined a fine collection of fossils belonging to Mr. Markoe, who has taken an active part in founding an institution here for the promotion of science and natural history. The day before our departure I had a long and agreeable conversation with our ex-minister, Mr. Fox, whose sudden and unexpected death happened a few months later. I told him that some En-

glish travelers wondered that I should set out on a long tour when the English and American papers were descanting on the probability of a war. He said, that "when Macleod was detained prisoner in 1841, there was really some risk, because he might have been hanged any day by the New Yorkers, in spite of the desire of the Federal Government to save him; but now there is no war party in England, and all reasonable men here, including the principal officers of the army and navy, are against it. Some of the western people may be warlike, for there are many patriots who believe that it is their destiny to rise on the ruins of the British empire; but when the President, according to treaty, shall have given notice of a partition of Oregon, there will be time for negotiation. If one of two disputants threatens to knock the other down eighteen months hence, would you apprehend immediate mischief?" "They are not arming," said I. "No augury can be drawn from that fact," he replied; "the people are against peace establishments, knowing that there is no fear of hostile attacks from without unless they provoke them, and satisfied that their wealth and population are annually increasing. They are full of courage, and would develop extraordinary resources in a war, however much they would suffer at the first onset."

We then conversed freely on the future prospects of civilization in the North American continent. He had formed far less sanguine expectations than I had, but confessed, that though he had resided so many years in the country, he knew little or nothing of the northern states, especially of New England. When I dwelt on the progress I had witnessed, even in four years, in the schools and educational institutions, the increase of readers and of good books, and the preparations making for future scientific achievements, he frankly admitted that he had habitually contemplated the Union from a somewhat unfavorable point of view. I observed to him that Washington was not a metropolis, like London, nor even like Edinburgh or Dublin, but a town which had not thriven, in spite of government patronage. The members of Congress did not bring their families to it, because it would often take them away from larger cities, where they were

enjoying more refined and intellectual society. It was as if the Legislature of the British empire, representing not only England, Scotland, and Ireland, but Canada, Newfoundland, the West Indies, Australia, the Cape, and all the other dependencies of the British crown, were to meet in some third-rate town. Nor even then would the comparison be a fair one, because if there be one characteristic more than another which advantageously distinguishes three-fourths of the American population, it is the high social, intellectual, and political condition, relatively speaking, of the working classes. The foreign diplomatist residing in Washington lives within the borders of the slave territory, where the laborers are more degraded, and perhaps less progressive, than in any European state. Besides, the foreign embassador, in his official and political capacity, too often sees exposed the weak side of the constitution of the Union, and has to deplore the powerlessness of the federal executive to carry out its own views, and to control the will of thirty independent states, or as many *imperia in imperio*. Just when he may have come to an understanding with the leading statesmen on points of international law, so that his negotiations in any other metropolis would have been brought to a successful issue, he finds that the real difficulties are only beginning. It still remains to be seen whether the government is strong enough to contend with the people, or has the will so to act, or whether it will court popularity by yielding to their prejudices, or even exciting their passions. Such is at this moment the position of affairs, and of our minister at Washington.

CHAPTER XV.

Washington to Richmond.—Legislature of Virginia in Session.—Substitution of White for Slave Labor.—Progress of Negro Instruction.—Slave-dealers.—Kindness to Negroes.—Coal of Oolitic Period near Richmond.—Visit to the Mines.—Upright Fossil Trees.—Deep Shafts, and Thickness of Coal Seams.—Explosion of Gas.—Natural Coke.—Resemblance of the more modern Coal-measures to old Carboniferous Rocks.—Whites working with free Negroes in the Mines.

Dec. 16, 1845.—From Washington we went to Richmond, and were glad to find that the great southern line of railway from Acquia Creek had been completed since we were last here, by which we escaped twelve miles of jolting over a rough road, described with so much humor by Dickens.

At Richmond I went into the Supreme Court of Appeal, and, as I entered, heard the counsel who was pleading, cite a recent decision of the English Court of Chancery as bearing on his case. The Houses of Legislature of Virginia were in session, and I heard part of a debate on a proposed railway from Baltimore to the valley of the Great Kanawha, in Western Virginia. Much jealousy was expressed lest the metropolis of Maryland, instead of Richmond, should reap the chief fruits of this project, at which I was not surprised; for Virginia, with a population of 1,100,000 inhabitants, has no towns larger than Richmond and Norfolk. Beverly, and the early writers on this state, say, "that the people were prevented from congregating in large towns by the enjoyment of an extensive system of river navigation, which enabled merchant ships to sail up every where to the warehouses of each planter and receive their freight. Hence there was less activity and enterprise, and a want of the competition, which the collected life in cities promotes."*

One of the senators, whom I had met the day before at a dinner party, conversed with me on the publication of the geological

* See "Graham's History," vol. i. p. 145.

maps and reports of the State Survey, which have been admirably executed under the direction of Professor W. B. Rogers.

The division of legislative duties between a central power, such as I had just seen deliberating at Washington, and the separate and independent states, such as that now in simultaneous action here at Richmond, seems the only form fitted for a widely extended empire, if the representative system is to prevail. The present population of the different states may be compared, on an average, to that of English counties, or, at least, to colonies of the British empire. At the same period of the year, when each is managing its own affairs in regard to internal improvements—schools, colleges, police, railways, canals, and direct taxes—the central parliament is discussing questions of foreign policy—the division of Oregon, the state of the army and navy, questions of free trade, and a high or low tariff.

By aid of railways, steamers, and the electric telegraph, it might be possible to conduct all the business of the twenty-seven states at Washington, but not with the same efficiency or economy; for, in that case, the attention of the members of the two houses of Congress would be distracted by the number and variety of subjects submitted to them, and the leading statesmen would be crushed by the weight of official and parliamentary business.

While at Richmond, we saw some agreeable and refined society in the families of the judges of the Supreme Court and other lawyers; but there is little here of that activity of mind and feeling for literature and science which strikes one in the best circles in New England. Virginia, however, seems to be rousing herself, and preparing to make an effort to enlarge her resources, by promoting schools and internal improvements. Her pride has been hurt at seeing how rapidly her old political ascendency has passed away, and how, with so large and rich a territory, she has been outstripped in the race by newer states, especially Ohio. She is unwilling to believe that her negro population is the chief obstacle to her onward march, yet can not shut her eyes to the fact that the upper or hilly region of the Alleghanies, where the whites predominate, has been advancing in a more rapid ratio than the eastern counties. The

whites who live west of the Blue Ridge are about equal in number to those who live east of it; but the eastern division, or lower country, owns a greater number of slaves, and in right of them has more votes. The western men are talking loudly of a convention to place them on a more equal footing, some even desiring a separation into two states. There has also been a suggestion, that it might be well to allow a single county to declare itself free, without waiting for the emancipation of others. Among other signs of approaching change, I am told that several new settlers from the north have made a practical demonstration that slave labor is less profitable, even east of the Blue Ridge, than that of free whites. As we sailed down the Potomac from Washington, a landed proprietor of Fairfax county pointed out to me some estates in Virginia, on the right bank of the river, in which free had been substituted for slave labor since I was here in 1841. Some farmers came from New Hampshire and Connecticut, and, having bought the land at five dollars an acre, tilled it with their own hands and those of their family, aided in some cases by a few hired whites. To the astonishment of the surrounding planters, before the end of four years, they had raised the value of the soil from five to forty dollars per acre, having introduced for the first time a rotation of corn and green crops, instead of first exhausting the soil, and then letting it lie fallow for years to recover itself. They have also escaped the ruinous expense of feeding large bodies of negroes in those seasons when the harvest is deficient. They do not pretend to indulge in that hospitality for which the old Virginians and North Carolinians were celebrated, who often mortgaged their estates to pay the annual salary of their overseer, till he himself became the proprietor. The master, in that case, usually migrated with part of his negroes to settle farther south or southwest, introducing into the new states more civilized habits and manners than would have belonged to them had they been entirely peopled by adventurers from the north or from Europe.

On Sunday, December the 21st, we attended service in a handsome new Episcopal church, called St. Paul's, and heard the rector announce to the congregation that a decision had just

been come to (by a majority of all the proprietors of the church, as I was afterward informed), that one of the side galleries should henceforth be set apart exclusively for people of color. This resolution, he said, had been taken in order that they and their servants might unite in the worship of the same God, as they hoped to enter hereafter together into his everlasting kingdom, if they obeyed his laws. I inquired whether they would not have done more toward raising the slaves to a footing of equality in the house of prayer, if they had opened the same galleries to negroes and whites. In reply, I was assured that, in the present state of social feeling, the colored people would gain less by such joint occupancy, because, from their habitual deference to the whites, they would yield to them all the front places. There were few negroes present; but I am told that, if I went to the Baptist or Methodist churches, I should find the galleries quite full. There are several Sunday schools here for negroes, and it is a singular fact that, in spite of the law against instructing slaves, many of the whites have been taught to read by negro nurses. A large proportion of the slaves and free colored people here are of mixed breed. The employment of this class as in-door servants in cities arises partly from the interest taken in them by their white parents, who have manumited them and helped them to rise in the world, and partly because the rich prefer them as domestic servants, for their appearance is more agreeable, and they are more intelligent. Whether their superiority is owing to physical causes, and that share of an European organization which they inherit in right of one of their parents, or whether it may be referred to their early intercourse and contact with the whites,—in other words, to a better education,—is still matter of controversy.

Several Virginian planters have spoken to me of the negro race as naturally warm-hearted, patient, and cheerful, grateful for benefits, and forgiving of injuries. They are also of a religious temperament, bordering on superstition. Even those who think they ought forever to remain in servitude, give them a character which leads one to the belief that steps ought long ago to have been taken toward their gradual emancipation.

Had some legislative provision been made with this view before the annexation of Texas, a period being fixed after which all the children born in this state should be free, that new territory would have afforded a useful outlet for the black population of Virginia, and whites would have supplied the vacancies which are now filled up by the breeding of negroes. In the absence of such enactments, Texas prolongs the duration of negro slavery in Virginia, aggravating one of its worst consequences, the internal slave trade, and keeping up the price of negroes at home. They are now selling for 500, 750, and 1000 dollars each, according to their qualifications. There are always dealers at Richmond, whose business it is to collect slaves for the southern market; and, until a gang is ready to start for the south, they are kept here well fed, and as cheerful as possible. In a court of the jail, where they are lodged, I see them every day amusing themselves by playing at quoits. How much this traffic is abhorred, even by those who encourage it, is shown by the low social position held by the dealer, even when he has made a large fortune. When they conduct gangs of fifty slaves at a time across the mountains to the Ohio river, they usually manacle some of the men, but on reaching the Ohio river, they have no longer any fear of their attempting an escape, and they then unshackle them.

That the condition of slaves in Virginia is steadily improving, all here seem agreed. One of the greatest evils of the system is the compulsory separation of members of the same family. Since my arrival at Richmond, a case has come to my knowledge, of a negro who petitioned a rich individual to purchase him, because he was going to be sold, and was in danger of being sent to New Orleans, his wife and child remaining in Virginia. But such instances are far less common than would be imagined, owing to the kind feeling of the southern planters toward their "own people," as they call them. Even in extreme cases, where the property of an insolvent is brought to the hammer, public opinion acts as a powerful check against the parting of kindred. We heard of two recent cases, one in which the parents were put up without their children, and the mother being in tears, no one would bid till the dealer put the children up

also. They then sold very well. Another, where the dealer was compelled, in like manner, to sell a father and son together. I learned with pleasure an anecdote, from undoubted authority, very characteristic of the indulgence of owners of the higher class of society here toward their slaves. One of the judges of the Supreme Court at Richmond, having four or five supernumerary negroes in his establishment, proposed to them to go to his plantation in the country. As they had acquired town habits, they objected, and begged him instead to look out for a good master who would carry them to a city farther south, where they might enjoy a warm climate. The judge accordingly made his arrangements, and, for the sake of securing the desired conditions, was to receive for each a price below their market value. Just as they were about to leave Richmond for Louisiana, one of the women turned faint-hearted, at which all the rest lost courage; for their local and personal attachments are very strong, although they seem always ready to migrate cheerfully to any part of the world with their owners. The affair ended in the good-natured judge having to repurchase them, paying the difference of price between the sum agreed upon for each, and what they would have fetched at an auction.

Great sacrifices are often made from a sense of duty, by retaining possession of inherited estates, which it would be most desirable to sell, and which the owners can not part with, because they feel it would be wrong to abandon the slaves to an unknown purchaser. We became acquainted with the family of a widow, who had six daughters and no son to take on himself the management of a plantation, always a responsible, and often a very difficult undertaking. It was felt by all the relatives and neighbors to be most desirable that the property, situated in a remote part of the country, near the sea, should be sold, in order that the young ladies and their mother should have the benefit of society in a large town. They wished it themselves, being in very moderate circumstances, but were withheld by conscientious motives from leaving a large body of dependents, whom they had known from childhood, and who could scarcely hope to be treated with the same indulgence by strangers.

I had stopped at Richmond on my way south, for the sake of exploring geologically some coal mines, distant about thirteen miles from the city to the westward. Some of the largest and most productive of these, situated in Chesterfield County, belong to an English company, and one of them was under the management of Mr. A. F. Gifford, formerly an officer in the British army, and married to a Virginian lady. At their agreeable residence, near the Blackheath mines, we were received most kindly and hospitably. On our road from Richmond, we passed many fields which had been left fallow for years, after having been exhausted by a crop of tobacco. The whole country was covered with snow, and, in the pine forests, the tall trunks of the trees had a white coating on their windward side, as if one half had been painted. I persevered, nevertheless, in my examination of the mines, for my underground work was not impeded by the weather, and I saw so much that was new, and of high scientific interest in this coal-field, that I returned the following spring to complete my survey.

There are two regions in the state of Virginia (a country about equal in area to the whole of England proper), in which productive coal-measures occur. In one of these which may be called the western coal-field, the strata belong to the ancient carboniferous group, characterized by fossil plants of the same genera, and, to a great extent, the same species, as those found in the ancient coal-measures of Europe. The other one, wholly disconnected in its geographical and geological relations, is found to the east of the Appalachian Mountains, in the middle of that granitic region, sometimes called the Atlantic Slope.* In consequence of the isolated position of these eastern coal-beds, the lowest of which rest immediately on the fundamental granite, while the uppermost are not covered by any overlying fossiliferous formations, we have scarcely any means of determining their relative age, except by the characters of their included organic remains. The study of these, induced Professor W. B. Rogers, in his memoir, published in 1842,† to declare his opinion that

* See geological map of the U. S. in my "Travels in North America," vol. i. and ii. p. 92.

† Trans. of American Geologists, p. 298.

this coal was of newer date than that of the Appalachians, and was about the age of the Oolite or Lias, a conclusion which, after a careful examination of the evidence on the spot, and of all the organic remains which I could collect, appears to me to come very near the truth. If we embrace this conclusion, these rocks are the only ones hitherto known in all Canada and the United States, which we can prove, by their organic remains, to be of contemporaneous origin with the Oolitic or Jurassic formation of Europe. The tract of country occupied by the crystalline rocks, granite, gneiss, hornblende-schist, and others, which runs parallel to the Alleghany Mountains, and between them and the sea, is in this part of Virginia about seventy miles broad. In the midst of this area occurs the coal-field alluded to, twenty-six miles long, and varying in breadth from four to twelve miles. The James river flows through the middle of it, about fifteen miles from its northern extremity, while the Appomattox river traverses it near its southern borders. The beds lie in a trough (see section, fig. 4, p. 213), the lowest of them usually highly inclined where they crop out along the margin of the basin, while the strata higher in the series, occupying the central parts of the area, and which are devoid of organic remains and of coal, are nearly horizontal.

A great portion of these coal-measures consists of quartzose sandstone and coarse grit, entirely composed of the detritus of the neighboring granitic and syenitic rocks. Dark carbonaceous shales and clays, occasionally charged with iron ores, abound in the proximity of the coal-seams, and numerous impressions of plants, chiefly ferns and Zamites, are met with in shales, together with flattened and prostrate stems of Calamites and Equisetum. These last, however, the Calamites and Equisetum, are very commonly met with in a vertical position, more or less compressed perpendicularly. I entertain no doubt that the greater number of these plants standing erect in the beds above and between the seams of coal which I saw at points many miles distant from each other, have grown in the places where they are now buried in sand and mud, and this fact implies the gradual accumulation of the coal-measures during a slow and repeated subsidence of the whole region.

A great number of fossil fish, chiefly referable to two nearly allied species of a genus very distinct from any ichthyolite hitherto discovered elsewhere (a ganoid with a homocercal tail), occur in the lower strata, with a few shells; but they afforded me no positive characters to determine whether the deposit was of marine or fresh-water origin. Above these fossiliferous beds, which probably never exceed 400 or 500 feet in thickness, a great succession of grits, sandstone, and shales, of unknown depth, occur. They have yielded no coal, nor as yet any organic remains. No speculator has been bold enough to sink a shaft through them, and it is believed that toward the central parts of the basin they might have to pass through 2000 or 2500 feet of sterile rocks before reaching the fundamental coal-seams.

The next ideal section will show the manner in which I suppose the coal-field to be placed in a hollow in the granitic rocks, the whole country having suffered by great denudation, and the surface having been planed off almost uniformly, and at the same time overspread by a deep covering of gravel with red and yellow

Section showing the Geological Position of the James River, or East Virginian Coal-Field.

Fig. 4.

A. Granite, gneiss, &c.
B. Coal-measures.
C. Tertiary strata.
D. Drift or *ancient alluvium.*

clay, concealing the subjacent formation from view, so that the structure of the region could not be made out without difficulty but for artificial excavations. It will be seen by the section that the tertiary strata first make their appearance at Richmond about thirteen miles from the eastern outcrop of the coal, and they continue to occupy the lower country between that city and the Atlantic.

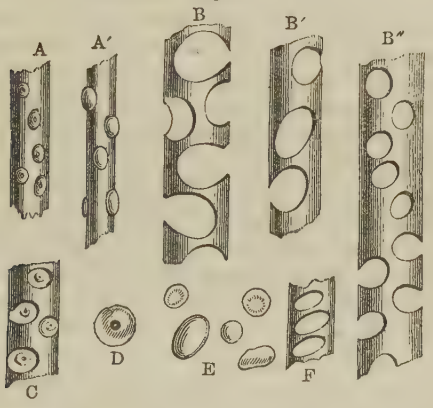
The only beds of coal hitherto discovered lie in the lower part

of the coal-measures, and consequently come up to the surface all round the margin of the basin. As the dip is usually at a considerable angle, vertical shafts, from 400 to 800 feet deep, are required to reach the great seam, at the distance of a few hundred yards inside the edge of the basin. It is only, therefore, along a narrow band of country that the coal can crop out naturally, and even here it is rarely exposed, and only where a river or valley has cut through the superficial drift, often thirty or forty feet thick. The principal coal-seam occurs in greatest force at Blackheath and the adjoining parts of Chesterfield county, where the coal is for the most part very pure, and actually attains the unusual thickness of between thirty or forty feet. I was not a little surprised, when I descended, with Mr. Gifford, a shaft 800 feet deep, to find myself in a chamber more than forty feet high, caused by the removal of the coal. Timber props of great strength are required to support the roof, and although the use of wood is lavish here, as in most parts of the United States, the strong props are seen to bend under the incumbent weight. This great seam is sometimes parted from the fundamental granite by an inch or two of shale, which seems to have constituted the soil on which the plants grew. At some points where the granite floor touches the coal, the contact may have been occasioned by subsequent disturbances, for the rocks are fractured and shifted in many places. This more modern coal, as well as that of Newcastle, and other kinds of more ancient date, exhibits under the microscope distinct evidence of vegetable structure, consisting in this case principally of parallel fibers or tubes, whose walls are pierced with circular or elongated holes.

By analysis it is found that so far as relates to the proportions of carbon and hydrogen, the composition of this coal is identical with that of ordinary specimens of the most ancient coal of America and Europe, although the latter has been derived from an assemblage of plants of very distinct species. The bituminous coal, for example, of the Ohio coal-field, and that of Alabama, yields the same elements.

For many years the cities of New York and Philadelphia have been supplied with gas for lighting their streets and houses, from

Fig. 5.



Vegetable Structure of Mineral Charcoal from Clover-hill Mines, Virginia.

coal of the Blackheath mines, and the annual quantity taken by Philadelphia alone, has of late years amounted to 10,000 tons. We might have expected, therefore, that there would be danger of the disengagement of inflammable gases from coal containing so much volatile matter. Accordingly, here, as in the English coal-pits, fatal explosions have sometimes occurred. One of these happened at Blackheath, in 1839, by which forty-five negroes and two white overseers lost their lives; and another almost as serious, so lately as the year 1844.

Before I examined this region, I was told that a strange anomaly occurred in it, for there were beds of coke overlying others consisting of bituminous coal. I found, on visiting the various localities of this natural coke, that it was caused by the vicinity or contact of volcanic rocks (greenstone and basalt), which, coming up through the granite, intersect the coal-measures, or sometimes make their way laterally between two strata, appearing as a conformable mass. As in the Durham coal-field in England (in the Haswell collieries, for example), the igneous rock has driven out all the gaseous matter, and, where

it overlies it, has deprived the upper coal of its volatile ingredients, while its influence has not always extended to lower seams. In some spots, the conversion of coal into coke seems to have been brought about, not so much by the heating agency of the intrusive basalt, as by its mechanical effect in breaking up and destroying the integrity of the beds, and rendering them permeable to water, thereby facilitating the escape of the gases of decomposing coal.

In conclusion, I may observe that I was much struck with the general similarity of this more modern or Oolitic coal-field, and those of ancient or Paleozoic date in England and in Europe generally. I was especially reminded of the carboniferous rocks near St. Etienne, in France, which I visited in 1843. These also rest on granite, and consist of coarse grits and sandstone derived from the detritus of granite. In both coal-fields, the French and the Virginian, upright Calamites abound; fossil plants are met with in both, almost to the exclusion of other organic remains, shells especially being absent. The character of the coal is similar, but in the richness and thickness of the seams the Virginian formation is pre-eminent. When we behold phenomena so identical, repeated at times so remote in the earth's history, and at periods when such very distinct forms of vegetation flourished, we may derive from the fact a useful caution, in regard to certain popular generalizations respecting a peculiar state of the globe during the remoter of the two epochs alluded to. Some geologists, for example, have supposed an atmosphere densely charged with carbonic acid to be necessary to explain the origin of coal—an atmosphere so unlike the present, as to be unfit for the existence of air-breathing, vertebrate animals; but this theory they will hardly be prepared to extend to so modern an era as the Oolitic or Triassic.*

During my visit to one of the coal-pits, an English overseer, who was superintending the works, told me that within his memory there had been a great improvement in the treatment

* See a paper on this coal-field, by the author, Quarterly Journal Geog. Soc., August, 1847, vol. iii. p. 261, and an accompanying memoir, descriptive of the fossil plants, by Charles J. F. Bunbury, For. Sec. G. S.

of the negroes. Some years ago, a planter came to him with a refractory slave, and asked him to keep him underground for a year by way of punishment, saying, that no pay would be required for his hire. The overseer retorted that he would be no man's jailer. The British company at Blackheath having resolved not to employ any slaves, and Mr. Gifford, having engaged 130 free negroes, found he could preserve good discipline without corporal punishment; and he not only persuaded several newly arrived laborers from England to work with the blacks, but old Virginians, also, of the white race, engaged themselves, although their countrymen looked down upon them at first for associating with such companions. They confessed that, for a time, "they felt very awkward," but it was not long before the proprietors of other mines followed the example which had been set them.

CHAPTER XVI.

Journey through North Carolina.—Wilmington.—Recent Fire and Passports for Slaves.—Cape Fear River and Smithfield.—Spanish Moss, and Uses of. — Charleston. — Anti-Negro Feeling. — Passage from Mulattoes to Whites.—Law against importing free Blacks.—Dispute with Massachusetts.—Society in Charleston.—Governesses.—War Panic.—Anti-English Feeling caused by Newspaper Press.—National Arbitration of the Americans.—Dr. Bachman's Zoology.—Geographical Representation of Species.—Rattle-Snakes.—Turkey Buzzards.

Dec. 23, 1845.—The monotony of the scenery in the principal route from the northern to the southern states is easily understood by a geologist, for the line of railroad happens to run for hundreds of miles on the tertiary strata, near their junction with the granitic rocks. Take any road in a transverse direction from the sea coast to the Alleghanies, and the traveler will meet with the greatest variety in the scenery.* In passing over the tertiary sands and clays, we see Pine Barrens where the soil is sandy, and a swamp, or cane-brake, where the argillaceous beds come to the surface. The entire absence of all boulders and stones, such as are observable almost every where in the New England States and New York, is a marked geological peculiarity of these southern lowlands. Such erratic blocks and boulders are by no means confined in the north to the granitic or secondary formations, for some of the largest of them, huge fragments of granite, for example, twenty feet in diameter, rest on the newer tertiary deposits of the island of Martha's Vineyard, off the coast of Massachusetts.

After leaving Richmond, I remarked that the railway from Weldon to Wilmington, through North Carolina, had not improved in the last three years, nor the stations or inns where we stopped. I was told, in explanation, that this line would soon

* See my "Travels in North America," vol. i. p. 93; and the colored geological map, vol. ii.

be superseded, or nearly so, by a more inland road now making through Raleigh. We reached Wilmington without much delay, in spite of the ice on the rails, and the running of our locomotive engine against a cow. On approaching that town, we were glad to see that the ground was not covered with snow as every where to the northward, and our eyes were refreshed by the sight of verdure, caused by the pines, and by two kinds of evergreen oaks, besides magnolias, and an undergrowth of holly and kalmia. In the streets and suburbs of Wilmington, the Pride-of-India tree (*Melia azedarach*) is very conspicuous, some of them twenty-five years old, having survived many a severe frost, especially that of the autumn of the present year, the severest since 1835. There are also some splendid live oaks here (*Quercus virens*), a tree of very slow growth, which furnishes the finest timber for ship-building.

We reached Wilmington after the steamboat for Charleston had departed, and I was not sorry to have a day to collect tertiary fossils in the cliffs near the town. The streets which had just been laid in ashes when we were here four years ago, are now rebuilt; but there has been another fire this year, imputed very generally to incendiaries, because it broke out in many places at once. There had been a deficiency of firemen, owing to the state having discontinued the immunity from militia duty, formerly conceded to those who served the fire-engines. The city, however, has now undertaken to find substitutes for young men who will join the fire companies. A lady told me that, when the conflagration burst forth very suddenly, she was with a merchant whose house was not insured, and, finding him panic-struck, and incapable of acting for himself, she had selected his ledgers and other valuables, and was carrying them away to her own house; but on the way the civic guard stopped her in the dark, and, suspecting her to be a person of color, required her to show her pass. She mentioned this incidentally, as a serious cause of delay when time was precious; but it brought home forcibly to our minds the extraordinary precautions which one half the population here think it necessary to take against the other half.

A large export of turpentine is the chief business of this port, and gashes are seen cut in the bark of the pines in the neighboring forest, from which resin exudes. The half decayed wood of these resinous pines forms what is called light wood, burning with a most brilliant flame, and often used for candles, as well as for reviving the fire. A North Carolinian is said to migrate most unwillingly to any new region where this prime luxury of life is wanting.

When we sailed for Charleston, the steamer first proceeded thirty miles to the mouth of the Cape Fear river, and then anchored there for several hours at a village called Smithfield, in North Carolina. Here I strolled along the shore, and in a few minutes found myself in a wild region, out of sight of all human habitations, and every sign of the work of man's hands. The soil, composed of white quartzose sand, was hopelessly barren. Coming to a marsh, I put up many peewits, which flew round me, uttering a cry resembling that of our European species. The evergreen oaks round the marsh were hung with Spanish moss, or Tillandsia, the pods of which are now full of downy seeds. This plant is not a parasite like the misletoe, of which a species is also common on the trees here, but simply supports itself on trees, without sending any roots into them, or drawing nourishment from their juices. It is what the botanists call an epiphyte, and is precisely the same species (*Tillandsia usneoides*), which is also common in Brazil; so that as we journey southward, this flowering epiphyte, together with the palmetto, or fan-palm, may be regarded as marking an approach toward a more tropical vegetation. When dried, the outer soft part of the Tillandsia decays and leaves a woody fiber in the middle, much resembling horse-hair in appearance, and very elastic. It is used in the United States, and exported to Liverpool, for stuffing mattresses. In preparing it they first bury the moss, and then take it up again when the exterior coating has rotted off. The birds also select only the woody fiber of the withered or dead stems for building their nests.

On the morning of Christmas-day, we reached Charleston, S.C., and found the interior of the Episcopal church of St. Philip

adorned with evergreens and with artificial flowers, in imitation of magnolias and asters. During the whole service the boys in the streets were firing pistols and letting off fireworks, which reminded me of the liberal expenditure of gunpowder indulged in by the Roman Catholics in Sicily, when celebrating Christmas in the churches. I once heard a file of soldiers at Girgenti fire off their muskets inside a church. Here at least it was on the outside; but, as it was no part of the ceremony, it was a greater interruption to the service. We saw some of the white race very shabbily dressed, and several mulattoes in the church, separated from the whites, in fashionable attire, which doubtless they were fully entitled to wear, being much richer. Instead of growing reconciled to the strong line of demarkation drawn between the two races, it appears to me more and more unnatural, for I sometimes discover that my American companions can not tell me, without inquiry, to which race certain colored individuals belong; and some English men and women, of dark complexion, might occasionally be made to feel awkward, if they were traveling with us here. On one occasion, the answer to my query was, "If I could get sight of his thumb nail I could tell you." It appears that the white crescent, at the base of the nail, is wholly wanting in the full blacks, and is that peculiarity which they acquire the last as they approximate by intermixture, in the course of generations, toward the whites.

I have just seen the following advertisement in a newspaper: —"Runaway.—Reward. A liberal reward will be given for the arrest of a boy named Dick. He is a bright mulatto—so bright, that he can readily, as he has done before, pass himself for a white. He is about thirty years of age," &c. Another advertisement of a runaway negro, states, "his color is moderated by in-door work."

So long as the present system continues, the idea of future amalgamation must be repugnant to the dominant race. They would shrink from it just as a European noble would do, if he were told that his grandchild or great grandchild would intermarry with the direct descendant of one of his menial servants. That the alleged personal dislike of the two races toward each

other, so much insisted upon by many writers, must arise chiefly from prejudice, seems proved, not only by the mixture of the races, but by the manner in which we see the Southern women, when they are ill, have three or four female slaves to sleep on the floor of their sick room, and often consign their babes to black nurses to be suckled.

That the attainder of blood should outlast all trace of African features, betrays a feeling allied to the most extravagant aristocratic pride of the feudal ages, and stands out in singular relief and contrast here in the South, where the whites, high and low, ignorant and educated, are striving among themselves to maintain a standard of social equality, in defiance of all the natural distinctions which difference of fortune, occupation, and degrees of refinement give rise to.

A few years ago a ship from Massachusetts touched at Charleston, having some free blacks on board, the steward and cook being of the number. On their landing, they were immediately put into jail by virtue of a law of South Carolina, not of very old standing. The government of Massachusetts, in a state of great indignation, sent a lawyer to investigate the case and remonstrate. This agent took up his abode at the Charleston Hotel, where we are now comfortably established. A few days after his arrival, the hotel was surrounded, to the terror of all the inmates, by a mob of "gentlemen," who were resolved to seize the New England envoy. There is no saying to what extremities they would have proceeded, had not the lawyer's daughter, a spirited girl, refused to leave the hotel. The excitement lasted five days, and almost every northern man in Charleston was made to feel himself in personal danger. At length, by the courage and energy of some of the leading citizens, Mr. H—— was enabled to escape, and then the most marked attentions were paid, and civilities offered, to the young lady, his daughter, by the families of the very men who had thought it right, "on principle," to get up this riot. The same law has given rise to some very awkward disputes with the captains of English vessels, whose colored sailors have, in like manner, been imprisoned. To obtain redress for the injury, in such cases, is impossible. The Federal

Government is too weak to enforce its authority, and the sovereign state is sheltered under the ægis of the grand confederacy.

By virtue of a similar law, also, in force in Alabama, the crews of several vessels, consisting of free blacks, have been committed to jail at Mobile, and the captains obliged to pay the costs, and give bonds to carry them away.

I asked a New England merchant, who is here, why the city of Charleston did not increase, having such a noble harbor. He said, "There have been several great fires, and the rich are absentees for half the year, flying from malaria. Besides, you will find that large cities do not grow in slave states as in the North. Few, if any of the ships, now in this harbor, belong to merchants of Charleston."

We were as much pleased with what we saw of the society of Charleston, during this short visit, as formerly, when we were here in 1842. I have heard its exclusiveness much commented on; for there are many families here, whose ancestors started from genteel English stocks in Virginia two hundred years ago, and they and some of the eminent lawyers and others, who, by their education and talents, have qualified themselves to be received into the same circle, do not choose to associate on intimate terms with every one who may happen to come and settle in the place. There is nearly as wide a range in the degrees of refinement of manners in American as in European society, and, to counterbalance some unfavorable circumstances, the social system has also some advantages. There is too great a predominance of the mercantile class, and the democracy often selects rude and unpolished favorites to fill stations of power; but such men are scarcely ever without some talent. On the other hand, mere wealth is less worshiped than in England, and there is no rank and title to force men of slender abilities, and without even agreeable manners, into good company, or posts of political importance.

The treatment in the southern states of governesses, who usually come from the North or from England, is very kind and considerate. They are placed on a much greater footing of equality with the family in which they live, than in England. Occasionally we find that the mother of the children has staid at

home, in order that the teacher may take her turn, and go out to a party. This system implies a great sacrifice of domestic privacy; but when the monotony of the daily routine of lessons is thus relieved to the instructress, the pupil must also be a gainer. Their salaries are from 50 to 100 guineas, which is more than they receive in the northern states.

The negroes here have certainly not the manners of an oppressed race. One evening, when we had gone out to dine in the suburbs, in a close carriage, the same coachman returned for us at night with an open vehicle. It was very cold, the frost having been more intense this year than any winter since 1835, and I remonstrated strongly; but the black driver, as he shut the door, said, with a good-humored smile, "that all the other carriages of his master were engaged;" and added, "Never mind, it will soon be over!"

One of the judges of the Admiralty Court tells me that, on Christmas eve, the day we came here, at nine o'clock at night, when he was just going to bed, an English resident came to him whose mind was so full of the prevailing war-panic, that nothing would satisfy him but the obtaining immediate letters of naturalization. He seemed to think that hostilities with England might break out in the course of the night, and that, in consequence, all his property would be confiscated. He was accordingly enrolled as a citizen, "although," said the judge, "we shall not gain much by his courage, should we have to defend Charleston against a British fleet."

Some months ago a British post-office steam-ship sailed into the harbor here, and took soundings in various places, and this incident has given offense to many, although in reality the survey was made under the expectation that the proposed scheme for extending the line of British West India mail-steamers along this coast would soon take effect.

I asked a South Carolinian, a friend of peace, and one who thinks that a war would ruin the maritime states, why so many of the people betrayed so much sympathy with the hostile demonstration got up by the press against England. "We have a set of demagogues," he replied, "in this country, who trade on the

article called 'hatred to England,' as so much political capital, just as a southern merchant trades in cotton, or a Canadian one in lumber. They court the multitude by blustering and by threatening England. There is a natural leaning in the South toward Great Britain, as furnishing a market for their cotton, and they are averse to the high tariff which the northerners have inflicted on them. But these feelings are neutralized by a dislike of the abolitionist party in England, and by a strong spirit of antagonism to Great Britain, which the Irish bring over here. All these sources of estrangement, however, are as nothing in comparison with the baneful effect of your press, and its persevering misrepresentation of every thing American. Almost every white man here is a reader and a politician, and all that is said against us in England is immediately cited in our newspapers, because it serves to augment that political capital of which I have spoken." I remarked that the nation and its government are not answerable for all the thoughtless effusions of anonymous newspaper writers, and that the tone of the English journals, since the agitation of the Oregon affair, had been temperate, guarded, and even courteous. "It is very true," he said; "the Times, in particular, formerly one of the most insolent and malignant. But the change has been too sudden, and the motive too transparent. The English know that the world can never suspect them of want of courage if they show a disinclination to go to war. Not wishing to waste their blood and treasure for so useless a possession as Oregon, they are behaving like a man who, having insulted another, has no mind, when called out, to fight a duel about nothing. He therefore makes an apology. But such civility will not last, and if the anonymous abuse habitually indulged in were not popular, it would long ago have ceased."

A short time after this conversation, I fell in with a young officer of the American navy who was wishing for war, partly for the sake of active service, but chiefly from intense nationality. "We may get the worst of it," he said, "for a year or two, but England will not come out of the struggle without being forced to acknowledge that she has had to deal with a first-rate instead

of a second-rate power." Soon after this I met an English sportsman, who had been traveling for his amusement in the western states, where he had been well received, and liked the people much, but many of them had told him, "We must have a brush with the English before they will respect us."

This sentiment is strong with a certain party throughout the Union, and would have no existence if they did not respect the English, and wish in their hearts to have their good opinion. It may be well for an old nation to propound the doctrine that every people ought to rest on their own dignity, and be satisfied with their place in the world without troubling themselves about what others think of them, or running the risk of having applied to them the character which Goldsmith ascribed to the French of his times :—

> "Where the weak soul within itself unblest,
> Leans for support upon another's breast."

But they whose title to consideration is new, however real, will rarely occupy their true place unless they take it; whereas an older nation has seldom to assert its claims, and they are often freely conceded, long after it has declined from its former power. To an ambitious nation, feeding its imagination with anticipations of coming greatness, it is peculiarly mortifying to find that what they have actually achieved is barely acknowledged. They grow boastful and impatient to display their strength. When they are in this mood, no foreign country should succumb to them; but, on the other hand, it is equally impolitic and culpable to irritate them by disparagement, or by not yielding to them their proper place among the nations. "You class us," said one of their politicians to me in Washington, "with the South American republics; your embassadors to us come from Brazil and Mexico to Washington, and consider it a step in their advancement to go from the United States to Spain, or some second-rate German court, having a smaller population than two of our large states. Yet, in reality, where is there a people in the world, except France, with which it so much concerns you to live in amity as the United States, and with what other nation have you and your chief colonies so much commercial intercourse?"

On listening to complaints against the English press, my thoughts often recurred to Bonaparte's prosecution of the royalist emigrant, Peltier, after the peace of Amiens, February, 1803, and the appeal to the jury of Sir James Mackintosh, as counsel for the defendant, on the want of dignity on the part of the First Consul, then in reality the most powerful sovereign in Europe, in persecuting a poor, defenseless, and proscribed exile, for abusive editorial articles. The court and jury were probably of the same mind; but the verdict of guilty showed that they deemed it no light matter that the peace of two great nations should be disturbed, by permitting anonymous libels, or a continued outpouring of invective and vituperation, calculated to provoke the ruler of a friendly country. In America the sovereign people read every thing written against them, as did Napoleon to the last, and, like him, with unmitigated resentment.

Before leaving Charleston I called on Dr. Bachman, whose acquaintance I had made in 1842, and was glad to see on his table the first volumes of a joint work by himself and Audubon, on the land quadrupeds of North America. These authors will give colored figures and descriptions of no less than 200 mammalia, exclusive of cetacea, all inhabiting this continent between the southern limits of the Arctic region and the Tropic of Cancer, for they now include Texas in the United States. Not more than seventy-six species are enumerated by preceding naturalists, and several of these are treated by Bachman and Audubon not as true species but mere varieties. Their industry, however, in augmenting the list of new discoveries, is not always welcomed by the subscribers, one of whom has just written to say, "if you describe so many squirrels, I can not go on taking in your book." The tribe alluded to in this threatening epistle, especially the striped species, is most fully represented in North America, a continent so remarkable for its extent of woodland and the variety of its forest trees. Yet, after traveling so much in the woods, I had never got sight of more than three or four species, owing, I am informed, to their nocturnal habits. I regretted that I had not yet seen the flying squirrel in motion, and was surprised to hear that Dr. Bachman had observed about a hundred of them.

every evening, for several weeks, near Philadelphia, on two tall oaks, in the autumn, when acorns and chestnuts were abundant, and when they had spare time for play. They were amusing themselves by passing from one tree to another, throwing themselves off from the top of one of the oaks, and descending at a considerable angle to near the base of the other; then inclining the head upward just before reaching the ground, so as to turn and alight on the trunk, which they immediately climbed up to repeat the same manœuvre. In this way there was almost a continuous flight of them crossing each other in the air between the two trees.

I had heard much of the swamp-rabbit, which they hunt near the coast in South Carolina and Georgia, and was glad to see a stuffed specimen. It is an aquatic hare (*Lepus palustris*), diving most nimbly, and outswimming a Newfoundland dog.

Dr. Bachman pointed out to me ten genera of birds, and ten of quadrupeds, all peculiar to North America, but each represented on the opposite side of the Rocky Mountains by distinct species. The theory of specific centers, or the doctrine that the original stock of each species of bird and quadruped originated in one spot only, may explain in a satisfactory manner one part of this phenomenon; for we may assume that a lofty chain of mountains opposed a powerful barrier to migration, and that the mountains were more ancient than the introduction of these particular quadrupeds and birds into the planet. But the limitation of peculiar generic types to certain geographical areas, now observed in so many parts of the globe, points to some other and higher law governing the creation of species itself, which in the present state of science is inscrutable to us, and may, perhaps, remain a mystery forever. The adaptation of peculiar forms, instincts, qualities, and organizations to the present geography and climate of a region, may be a part only of the conditions which govern in every case the relations of the animate beings to their habitations. The past condition and changes of the globe and its inhabitants, throughout the whole period when the different beings were entering, each in succession, upon the scene, and all the future conditions and changes to the end of vast periods, during which they may be destined to exist, ought to be

known, before we can expect to comprehend why certain types were originally selected for certain areas, whether of land or water.

In the museum of the Medical College, Professor Shepard showed me a fine specimen of the large rattle-snake of South Carolina (*Crotalus adamantinus*), preserved in spirits. It was said to have been nine years old, having six rattles, the tail acquiring an additional one annually after the third year. When brought into the laboratory in winter in a torpid state, an electric shock had been communicated to it, which threw it into a state of extreme excitement. Two tortoises, nearly torpid, were also put by the professor into a glass bell filled with laughing gas, and they immediately began to leap about with great agility, and continued in this state of muscular excitement for more than an hour.

In both my tours in America, I heard stories not only of dogs, which had died suddenly from the bite of rattle-snakes, but men also; and the venom is said to be more virulent in the south. I rejoiced, therefore, that I had chosen the coldest season for my visit to these latitudes; but it seemed singular that in my wanderings to explore the rocks in various states, I had never yet got sight of a single snake, or heard its rattle. That they make a much greater figure in books of travels than in real life, I can not but suspect.

Almost all the best houses in Charleston are built with verandahs, and surrounded with gardens. In some of the streets we admired the beautiful evergreens, and remarked among them the *Prunus virginiana*, with black cherries hanging to it, and *Magnolia grandiflora*. The number of turkey buzzards is surprising. I have seen nine of them perched side by side, like so many bronze statues, breaking the long line of a roof in the clear blue sky, while others were soaring in the air, each feather, at the extremity of their extended wings, being spread out, so as to be seen separate from the rest. A New England friend, whom we met here, seeing my interest in these birds, told me they are the sole scavengers of the place, and a fine of five dollars is imposed on any person who kills one. "You are lucky in being here in a cold season; if you should come back in summer, you would think that these vultures had a right to the whole city, it stinks so intolerably."

CHAPTER XVII.

Charleston to Savannah.—Beaufort River, or Inland Navigation in South Carolina.—Slave Stealer.—Cockspur Island.—Rapid Growth of Oysters.—Eagle caught by Oyster.—Excursion from Savannah to Skiddaway Island.—Megatherium and Mylodon.—Cabbage Palms, or Tree Palmettos.—Deceptive Appearance of Submarine Forest.—Alligators swallowing Flints.—Their Tenacity of Life when decapitated.—Grove of Live Oaks.—Slaves taken to Free States.

Dec. 28, 1845.—A FINE steam-ship, the General Clinch, conveyed us to Savannah. I was surprised, when sailing out of the beautiful harbor of Charleston, on a bright scorching day, to see a cloud of smoke hanging over the town, and learned that they burn here not a little of what is called Liverpool coal. Among others on board, was a female passenger from one of the western states, who, having heard me make inquiries for my wife, went up to her in the ladies' cabin and said, "Your old man is mighty eager to see you;" "old man," as we afterward found, being synonymous with husband in the West. We were to go by the inland navigation, or between the islands and the coast. After passing Edisto Point, we ran aground at the entrance of St. Helena's Sound, in mid-passage, and were detained some hours till the tide floated us off to the westward, through the winding mazes of a most intricate channel, called the Beaufort River. We passed between low sandy islands, and an equally low mainland, covered with evergreen oaks, and long-leaved pines and palmettos, six or seven feet high. Sometimes we sailed by a low bluff or cliff of white sand, two or three feet in height, then by a cotton plantation, then by large salt marshes covered with reeds, on which the cattle are supported when fodder is scarce in winter. The salt water in this narrow channel was as calm as a lake, and perfectly clear. Numerous wild ducks were diving as our steamboat approached, and beds of oysters were uncovered between high and low water mark. It

was a novel and curious scene, especially when we approached Beaufort, a picturesque town composed of an assemblage of villas, the summer residences of numerous planters, who retire here during the hot season, when the interior of South Carolina is unhealthy for the whites. Each villa is shaded by a verandah, surrounded by beautiful live oaks and orange trees laden with fruit, though with leaves slightly tinged by the late severe frost. It is hoped that these orange trees will not suffer as they did in February, 1835, for then the cold attacked them much later in the season, and after the sap had risen. The Pride-of-India tree, with its berries now ripe, is an exotic much in favor here. A crowd of negroes, in their gay Sunday clothes, came down to look at our steamboat, grinning and chattering, and looking, as usual, perfectly free from care, but so ugly, that although they added to the singularity and foreign aspect of the scene, they detracted greatly from its charms.

Had it not been for the dense beds of oysters between high and low water mark, hundreds of which adhere to the timbers of the pier at Beaufort, as barnacles do in our English ports, I might have supposed the channel to be really what it is called, a river.

An old Spanish fort, south of Beaufort, reminded me that this region had once belonged to the Spaniards, who built St. Augustine, still farther to the south, the oldest city in the United States, and I began to muse on the wonderful history of the Anglo-Saxon race in settling these southern states. To have overcome and driven out in so short a time Indians, Spaniards, and French, and yet, after all, to be doomed to share the territory with three millions of negroes!

Of this latter race, we had not a few passengers on board. Going into the steerage to converse with some of them, my curiosity was particularly attracted to a group of three, who were standing by themselves. The two younger, a girl and a lad, were very frank, and willing to talk with me, but I was immediately joined by a young white man, not ill-looking, but who struck me as having a very determined countenance for his age. "These colored people," he said, "whom you have been speaking to, belong to me, and they have probably told you that I have

brought them by railway from Augusta to Charleston. I hope to dispose of them at Savannah, but if not, I shall take them to Texas, where I may sell them, or perhaps keep them as laborers and settle there myself." He then told me he had fought in the wars for the independence of Texas, which I afterward found was quite true, and, after telling me some of his adventures, he said, "I will take 450 dollars for the girl, and 600 for the boy; they are both of pure blood, would stand a hot climate well; they can not read, but can count up to a thousand." By all these qualities, negative and positive, he evidently expected to enhance in my eyes the value of the article which he meant me to buy; and no sooner did he suspect, by one of my questions, that I was a foreigner traveling for my amusement, than he was off the subject, and I attempted in vain to bring him back to it and to learn why the power of counting was so useful, while that of reading was undesirable. About three weeks after this incident, when we were at Macon in Georgia, there was a hue and cry after a thief who had stolen five negroes near Augusta, and had taken them to Savannah, in the General Clinch, where he had sold one of them, a girl, for 450 dollars. From Savannah he had been traced with the remaining four, by railway, to Macon, whence it was supposed he had gone south. The description of the delinquent left me no doubt that he was my former fellow-traveler, and I now learnt that he was of a respectable family in Georgia, the spoiled child of a widowed mother, self-willed and unmanageable from his boyhood, and who had gone off against the wishes of his relations to fight in Texas. I recollected that when we were at Beaufort, none of his negroes had gone ashore, and that he had kept his eye always anxiously on them during our stay there. I also remarked, that the planters on board, who, for the most part, were gentlemanlike in their manners, shunned all intercourse with this dealer, as if they regarded his business as scarcely respectable. A vast majority of the slave-owners acquiesced originally in the propriety of abolishing the external slave-trade; but the internal one can not, they say, be done away with, without interfering with the free circulation of labor from an overpeopled district to another where hands are scarce. To

check this, they maintain, would injure the negroes as much as their masters. When they are forced to part with slaves, they usually sell one to another, and are unwilling to dispose of them to a stranger. It is reckoned, indeed, quite a disgrace to a negro to be so discarded. When the former master bids for one of his "own people," at a sale of property forced on by debt, the public are unwilling to bid against him. It is clear, therefore, that a dealer must traffic in the lowest and most good-for-nothing class of laborers, many of whom, in Europe, would be in the hands of policemen, or in convict ships on their way to a penal settlement. I heard of one of these dealers, who, having made a large fortune, lived sumptuously in one of the towns on the Mississippi after retiring from business, but in spite of some influential connections, he was not able to make his way into the best society of the place.

At the mouth of the Savannah River we passed Cockspur Island, where there is a fort. The sea is said to have encroached many hundred yards on this island since 1740, as has happened at other points on this low coast; but there has been also a gain of land in many places. An officer stationed at the fort told me, that when a moat was dug and the sea-water admitted, oysters grew there so fast, that, at the end of two years, they afforded a regular supply of that luxury to the garrison. The species of oyster which is so abundant here (*Ostrea virginica*) resembles our European *Ostrea edulis* in shape, when it lives isolated and grows freely under water; but those individuals which live gregariously, or on banks between high and low water, lose their round form and are greatly lengthened. They are called racoon oysters, because they are the only ones which the racoons can get at when they come down to feed at low tide. Capt. Alexander, of the U.S. artillery, told me that, in the summer of 1844, he saw a large bald-headed eagle, *Aquila leucocephala*, which might measure six feet from tip to tip of its extended wings, caught near the bar of the Savannah river by one of these racoon oysters. The eagle had perched upon the shellfish to prey upon it, when the mollusk suddenly closed its valves and shut in the bird's claw, and would have detained its enemy till the rising tide had come up and drowned it, had not the cap-

tain in his boat secured it with a noose, and disengaged it from the oyster. He flapped his wings violently as they approached, but could not escape.

Dec. 29.—Savannah has a population of 12,000 souls, but seems rather stationary, though some new buildings are rising. The mildness of its climate is attributed partly to the distance to which the Alleghany Mountains retire from the sea coast in this latitude, and partly to the proximity of the Gulf-stream. But many of the northern invalids, who are consumptive, and had hoped to escape a winter by taking refuge in this city, are complaining of the frost, and say that the houses are inadequately protected against cold. The sun is very powerful at mid-day, and we see the *Camellia Japonica* in the gardens flowering in the open air; but the leaves of the orange trees look crisp and frost-bitten, and I am told that the thermometer lately fell as low as 17° Fahr., so that even the salt water froze over in some of the marshes.

While at Savannah I made a delightful excursion, in company with Dr. Le Conte, Captain Alexander, and Mr. Hodgson, to Skiddaway, one of the sea-islands, which may be said to form part of a great delta on the coast of Georgia, between the mouths of the Savannah and Ogeechee rivers. This alluvial region consists of a wide extent of low land elevated a few feet above high water, and intersected by numerous creeks and swamps. I gave some account in my former tour of my visit to Heyner's Bridge,* where the bones of the extinct mastodon and mylodon were found. Skiddaway is five or six miles farther from Savannah in the same southeast direction, and is classical ground for the geologist, for, on its northwest end, where there is a low cliff from two to six feet in height, no less than three skeletons of the huge *Megatherium* have been dug up, besides the remains of the *Mylodon*, *Elephas primigenius*, *Mastodon giganteus*, and a species of the ox tribe. The bones occur in a dark peaty soil or marsh mud, above which is a stratum, three or four feet thick, of sand, charged with oxide of iron, and below them and beneath the sea level, occurs sand containing a great number of marine fossil shells, all

* Travels in North America, vol. i. p. 163.

belonging to species which still inhabit the neighboring coast, showing how modern is the date, geologically speaking, of the extinct animals, since they were evidently posterior to the existing molluscous fauna of the sea.

The scenery of the low flat island of Skiddaway had more of a tropical aspect than any which I had yet seen in the United States. Several distinct species of palmetto, or fan palm, were common, as also the tree, or cabbage palm, a noble species, which

Fig. 6.

Chamærops Palmetto.
Cabbage Palm, or Tall Palmetto, Skiddaway Island, Georgia.

I had never seen before. In some of the cotton-fields many individuals were growing singly, having been planted at regular intervals to the exclusion of all other trees, and were from twenty-five to forty feet in height. The trunk bulges at the base, above which it is usually about one foot in diameter, and of the same size throughout, or rather increasing upward. At the top the

leaves spread out on all sides, as in other fan palms. Those which have fallen off do not leave separate scars on the trunk, but rings are formed by their bases. The cabbage of the young palm is used as a vegetable, but when this part is cut off, the plant is killed. I saw sections of the wood, and the structure of it resembles that of true palms. It is said by Elliott to be invaluable for submarine construction, as it is never attacked by the ship-worm, or *Teredo navalis*. This tree flourishes in a clay soil, and is of slow growth. It requires the sea air, and has not suffered from the late severe frost. We saw some plants twelve years old, and others which in fifty years had attained a height of about twenty or twenty-five feet. Such as have reached forty feet are supposed to be at least a century old. In those fields where the negroes were at work, and where the cotton plants were still standing five or six feet high, with no other trees except these palms, I could well imagine myself in the tropics. We put up many birds, the names of which were all familiar to Dr. Le Conte; among others the Virginian partridge (*Ortyx virginiana*), the rook (*Corvus americanus*), nearly resembling our European species, not only in plumage but in its note, the marsh hawk (*Circus cyaneus*), the snowy heron (*Ardea candidissima*), the bald-headed eagle, the summer duck, and meadow lark. We also heard the mocking-bird in the woods. As we were entering a barn, a screech-owl (*Bubo asio*, Lin.) flew out nearly in the face of one of the party. When we came to a tree partially barked by lightning, I asked Dr. Le Conte whether he adopted the theory that this decortication was caused by steam; the sap or juices of the tree, immediately under the bark, being suddenly converted by the heat of the electric fluid into vapor. He said that lightning was so common here, that he had had opportunities of verifying this hypothesis by observing that the steam, or small cloud of smoke, as it is commonly called, which is produced when a tree is struck, disappears immediately, as if by condensation.

There are decided proofs on the coast of Georgia of changes in the level of the land, in times geologically modern, and I shall afterward mention the stumps of trees below the sea-level, at the

mouth of the Altamaha river, in proof of a former subsidence; but a stranger is in great danger of being deceived, because the common pine, called the loblolly (*Pinus tæda*), has tap-roots as large as the trunk, which run down vertically for seven or eight feet, without any sensible diminution in size. At the depth of about ten feet below the surface this root sends off numerous smaller ones horizontally, and when the sea has advanced and swept away the enveloping sand from such tap-roots, they remain erect, and become covered with barnacles and oysters. When so circumstanced, they have exactly the appearance of a submarine forest, caused by the sinking down of land. A geologist, who is on his guard against being deceived by the undermining of a cliff, and the consequent sliding down and submergence of land covered with trees which remain vertical, may yet be misled by finding these large tap-roots standing upright under water.

As the alligators are very abundant in the swamps near the mouth of the Savannah, I heard much of their habits, and was surprised to learn that pebbles are often met with in their stomachs, which they have swallowed to aid their digestion, as birds eat sand and gravel to assist the mechanical action of the gizzard. The peculiar conformation of the alligator's stomach confirms this view. On the site of some of the old Indian villages whole baskets full of flint arrow-heads have been picked up, and some of these, much worn and rubbed, have been taken out of the stomachs of these reptiles.

The extraordinary tenacity of life manifested by the alligator when seriously mutilated, led Dr. Le Conte to make a series of experiments, with a view of throwing light on the philosophy of the nervous system in man as compared to the lower animals. A young alligator was decapitated at the point where the neck or atlas articulates with the occiput. Not more than two ounces of blood flowed from the wound. The jaws of the detached head still snapped at any thing which touched the tongue or lining membrane of the mouth. After the convulsions produced by decapitation had subsided, the trunk of the animal remained in a state of torpor resembling profound sleep. But when pricked or pinched on the sides, the creature would scratch the spot, some-

times with the fore, and sometimes with the hind foot, according to the situation of the injury inflicted. These movements of the limbs were promptly and determinately performed, and were always confined to the members on the side of the irritating cause. If touched below the posterior extremity on the thick portion of the tail, he would slowly and deliberately draw up the hind foot, and scratch the part, and would use considerable force in pushing aside the offending object. These experiments were repeatedly performed, and always with the same results, appearing to prove that the creature could not have been totally devoid of sensation and consciousness. Dr. Le Conte concludes, therefore, that, although in man and the more highly organized vertebrata, volition is seated in the brain, or encephalus, this function in reptiles must extend over the whole spinal cord, or cerebro-spinal axis. Some, however, may contend that the motions observed are merely spasmodic and involuntary, like sneezing, the necessary results of certain physical conditions of the nervous system, and not guided in any way by the mind. If so, it can not be denied that they have all the appearance of being produced with a perfect knowledge of the end in view, and to be directed peculiarly to that end; so that, if we embrace the hypothesis that they supervene simply on the application of stimuli, without any sensations being carried to the brain, and without any co-operation of the mind, must we not in that case suspect that a large proportion of the actions of quadrupeds, usually attributed to the control of the will, may in like manner be performed without consciousness or volition ?*

When we got back to Savannah, I found my wife just returned from Bonaventure, about four miles distant, where she had accompanied a lady on a drive to see a magnificent grove of live oaks, the branches of which, arching over head, form a splendid aisle. It was formerly the fashion of the planters of the Carolinas and Georgia, to make summer tours in the northern states, or stay in watering-places there; but they are now in the habit of visiting the upland region of the Alleghanies in their

* See a paper by J. Le Conte, New York Journal of Medicine, Nov. 1845, p. 335.

own states, and speak enthusiastically of the beauty and grandeur of the scenery. Their intercourse with the north was useful in giving them new ideas, and showing them what rapid progress civilization is making there; but they have been deterred from traveling there of late, owing, as they tell me, to the conduct of the abolitionists toward the negro servants whom they take with them,

Sometimes a writ of Habeas Corpus is served, and the colored servant is carried before a magistrate, on the plea that he or she are detained against their will. Even where they have firmly declared their wish to return to their owners, they have been often unsettled in their ideas, and less contented afterward with their condition.

CHAPTER XVIII.

Savannah to Darien.—Anti-Slavery Meetings discussed.—War with England.—Landing at Darien.—Crackers.—Scenery on Altamaha River.—Negro Boatmen singing.—Marsh Blackbird in Rice Grounds.—Hospitality of Southern Planters. — New Clearing and Natural Rotation of Trees. — Birds. — Shrike and Kingfisher. — Excursion to St. Simon's Island.—Butler's Island and Negroes.—Stumps of Trees in Salt Marshes proving Subsidence of Land.—Alligator seen.—Their Nests and Habits. Their Fear of Porpoises.—Indian Shell Mound on St. Simon's Island.—Date-palm, Orange, Lemon, and Olive Trees.—Hurricanes.—Visit to outermost Barrier Island.—Sea Shells on Beach.—Negro Maid-Servants.

Dec. 31, 1845.—On the last day of the year we sailed in a steamer from Savannah to Darien, in Georgia, about 125 miles farther south, skirting a low coast, and having the Gulf-stream about sixty miles to the eastward of us. Our fellow-passengers consisted of planters, with several mercantile men from northern states. The latter usually maintained a prudent reserve on politics; yet one or two warm discussions arose, in which not only the chances of war with England, and the policy of the party now in power, but the more exciting topic of slavery, and the doings at a recent anti-slavery meeting in Exeter Hall, London, were spoken of. I was told by a fellow-passenger, that some of the Georgian planters who are declaiming most vehemently against Mr. Polk for so nearly drawing them into a war with Great Britain, were his warmest supporters in the late presidential election. "They are justly punished," he said, "for voting against their principles. Although not belonging to the democratic party, they went for Polk in order that Texas might be annexed; and now that they have carried that point, their imaginations are haunted with the image of the cotton trade paralyzed, an English fleet ravaging the coast and carrying away their negroes, as in the last war, and, worst of all, the abolitionists of the north looking on with the utmost complacency at their ruin." One of the most moderate of the planters, with whom I conversed apart, told me that the official avowal of the English

government, that one of the reasons for acknowledging the independence of Texas was its tendency to promote the abolition of slavery, had done much to alienate the planters, and increase the anti-English feeling in the south. He also observed, that any thing like foreign dictation or intermeddling excited a spirit of resistance, and asked whether I thought the emancipation of the West Indian slaves would have been accelerated by meetings in the United States or Germany to promote that measure. He then adverted to the letters lately published by Mr. Colman, on English agriculture, in which the poverty, ignorance, and stationary condition of the British peasantry are painted in most vivid colors. He also cited Lord Ashley's speeches on the miseries endured underground by women and boys in coal-mines, and said that the parliamentary reports on the wretched state of the factory children in England had been largely extracted from in their papers, to show that the orators of Exeter Hall might find abuses enough at home to remedy, without declaiming against the wrongs of their negroes, whose true condition and prospects of improvement were points on which they displayed consummate ignorance. Finding me not disposed to controvert him, he added, in a milder tone, that, for his part, he thought the southern planters owed a debt of gratitude to England for setting the example to American philanthropists of making pecuniary compensation to those whose slaves they set free.

When I had leisure to think over this conversation, and the hint conveyed to my countrymen, how they might best devote their energies toward securing the progress of the laboring classes at home, it occurred to me that some of Channing's discourses against slavery might be useful to a minister who should have the patriotism to revive the measure for educating the factory children, proposed in 1843 by Sir James Graham, and lost in consequence of the disputes between the Church and the Dissenters. It would be easy to substitute employer for owner, and laborer for slave, and the greater part of the eloquent appeal of the New England orator would become appropriate :—

"Mutato nomine de te
Fabula narratur."

"Every man," says Channing, in his argument against slavery, "has a right to exercise and invigorate his intellect, and whoever obstructs or quenches the intellectual life in another, inflicts a grievous and irreparable wrong."* "Let not the sacredness of individual man be forgotten in the feverish pursuit of property. It is more important that the individual should respect himself, and be respected by others, than that national wealth, which is not the end of society, should be accumulated."† "He (the slave) must form no plans for bettering his condition, whatever be his capacities; however equal to great improvements of his lot, he is chained for life to the same unwearied toil. That he should yield himself to intemperance we must expect, unused to any pleasures but those of sense." "We are told," says the same author, "that they are taught religion, that they hear the voice of Christ, and read in his cross the unutterable worth of their spiritual nature; but the greater part are still buried in heathen ignorance."‡

"They may be free from care, and sure of future support, but their future is not brightened by images of joy; it stretches before them sterile and monotonous, sending no cheering whisper of a better lot."§

An inhabitant of one of the six New England States, or of New York, where, in a population of five millions of souls, one teacher is now supplied for every thirty children, may be entitled to address this language to the southern slave owner; but does the state of the working classes, whether in Great Britain or the West Indies, authorize us to assume the same tone?

A merchant from New York told me, that in "The Union," a semi-official journal published at Washington, and supposed to represent the views of the cabinet, an article had just appeared, headed, "The whole of Oregon or none," which for the first time gave him some uneasiness. "A war," he said, might seem too absurd to be possible; but a few months ago he had thought the election of Mr. Polk equally impossible, and the President might

* Channing's Works, vol. ii. p. 35.
† Vol. ii. p. 44.
‡ Vol. ii. p. 94.
§ Vol. ii. p. 89.

go on tampering with the popular passions, till he could not control them. The presidential election would have ended differently," he affirmed, "but for 5000 fraudulent votes given in the city of New York." I asked if he thought the people would enter with spirit into a war for which they had made no preparation. "It would depend," he said, "on the policy of England. If she made predatory and bucaniering descents upon the coast, as in the last war, or attacked some of the great eastern sea-ports, she might stir up the whole population to a state of frenzied energy, and cause them to make great sacrifices; but if she put forth the whole strength of her fleets against the commerce of the Union, and stood on the defensive in Canada, so as to protract the campaign, and cripple their revenues derived from customs, the people, remembering that when the war commenced, the cabinet of St. James's and the English press were pacific and willing to come to a compromise about Oregon, would become impatient of direct taxation, and turn against the party which had plunged them into hostilities."

Dec. 31.—At the end of a long day's sail, our steamer landed us safely at the village of Darien, on the sandy banks of the river Altamaha (which is pronounced Altamaha, the a's broad). The sky was clear, and the air mild, but refreshing, and we were told that we must walk to the inn, not far off. Five negroes were very officious in offering their services, and four of them at length adjusted all our packages on their backs. The other, having nothing else to do, assumed the command of the party, having first said to me, "If you not ready, we will hesitate for half an hour." We passed under some of the noblest evergreen oaks I had yet seen, their large picturesque roots spreading on all sides, half out of the loose, sandy soil, and their boughs hung with unusually long weepers of Spanish moss. When I had paid our four porters, the one who had gone first, assuming an air of great importance, "hoped I would remember the pilot." As the inn was almost in sight from the landing, and our course a direct one in a bright moonlight night, and all the men quite familiar with every step of the way, we were not a little diverted at the notion of paying for a guide, but the good-humored coun-

tenance of the pilot made his appeal irresistible. The bed at our humble inn was clean, but next morning we were annoyed by having to sit down to breakfast with a poor white family, to whom the same compliment could not be paid—a man and his wife and four children, belonging to the class called "crackers" in Georgia. The etymology of this word is rather uncertain, some deriving it from the long whips used by the wagoners. They are a class of small proprietors, who seem to acquire slovenly habits from dependence on slaves, of whom they can maintain but few.

The next morning, while we were standing on the river's bank, we were joined by Mr. Hamilton Couper, with whom I had corresponded on geological matters, and whom I have already mentioned as the donor of a splendid collection of fossil remains to the museum at Washington, and, I may add, of other like treasures to that of Philadelphia. He came down the river to meet us in a long canoe, hollowed out of the trunk of a single cypress, and rowed by six negroes, who were singing loudly, and keeping time to the stroke of their oars. He brought us a packet of letters from England, which had been sent to his house, a welcome New Year's gift; and when we had glanced over their contents, we entered the boat and began to ascend the Altamaha.

The river was fringed on both sides with tall canes and with the cypress (*Cupressus disticha*), and many other trees, still leafless, which, being hung with gray moss, gave a somber tone to the scenery at this season, in spite of the green leaves of several species of laurel, myrtle, and magnolia. But wherever there was a break in the fringe of trees, which flourished luxuriantly in the swamps bordering the river, a forest of evergreen pines was seen in the back ground. For many a mile we saw no habitations, and the solitude was profound; but our black oarsmen made the woods echo to their song. One of them taking the lead, first improvised a verse, paying compliments to his master's family, and to a celebrated black beauty of the neighborhood, who was compared to the "red bird." The other five then joined in chorus, always repeating the same words. Occa-

sionally they struck up a hymn, taught them by the Methodists, in which the most sacred subjects were handled with strange familiarity, and which, though nothing irreverent was meant, sounded oddly to our ears, and, when following a love ditty, almost profane.

Darien is on the left or northern bank of the Altamaha. About fifteen miles above it, on the opposite bank, we came to Hopeton, the residence of Mr. H. Couper, having first passed from the river into a canal, which traversed the low rice fields. Here we put up prodigious flights of the marsh blackbird (*Ajelaius phœniceus*), sometimes called the red-winged starling, because the male has some scarlet feathers in the upper part of his wing. When several thousands of them are in rapid motion at once, they darken the air like a cloud, and then, when the whole of them suddenly turn their wings edgeways, the cloud vanishes, to reappear as instantaneously the next moment. Mr. Couper encourages these birds, as they eat up all the loose grains of rice scattered over the field after the harvest has been gathered in. If these seeds are left, they spring up the year following, producing what is called volunteer rice, always of inferior quality to that which is regularly sown. From the rice grounds we walked up a bank to a level table land, composed of sand, a few yards above the river, and covered with pines and a mixture of scrub oak. Here, in this genial climate, there are some wild flowers in bloom every day of the year. On this higher level, near the slope which faces the rice fields and the river, stands the house of Hopeton, where we spent our time very agreeably for a fortnight. Much has been said in praise of the hospitality of the southern planter, but they alone who have traveled in the southern states, can appreciate the perfect ease and politeness with which a stranger is made to feel himself at home. Horses, carriages, boats, servants, are all at his disposal. Even his little comforts are thought of, and every thing is done as heartily and naturally as if no obligation were conferred. When northerners who are not very rich receive guests in the country, where domestic servants are few and expensive, they are often compelled, if they would insure the comfort of their visitors, to perform me-

nial offices themselves. The sacrifices, therefore, made by the planter, are comparatively small, since he has a well-trained establishment of servants, and his habitual style of living is so free and liberal, that the expense of a few additional inmates in the family is scarcely felt. Still there is a warm and generous openness of character in the southerners, which mere wealth and a retinue of servants cannot give; and they have often a dignity of manner, without stiffness, which is most agreeable.

The landed proprietors here visit each other in the style of English country gentlemen, sometimes dining out with their families and returning at night, or, if the distance be great, remaining to sleep and coming home the next morning. A considerable part of their food is derived from the produce of the land; but, as their houses are usually distant from large towns, they keep large stores of groceries and of clothing, as is the custom in country houses in some parts of Scotland.

Near the house of Hopeton there was a clearing in the forest, exhibiting a fine illustration of that natural rotation of crops, which excites, not without reason, the surprise of every one who sees it for the first time, and the true cause of which is still imperfectly understood. The trees which had been cut down were full-grown pines (*Pinus australis*), of which the surrounding wood consists, and which might have gone on for centuries, one generation after another, if their growth had not been interfered with. But now they are succeeded by a crop of young oaks, and we naturally ask, whence came the acorns, and how were they sown here in such numbers? It seems that the jay (*Garrulus cristatus*) has a propensity to bury acorns and various grains in the ground, forgetting to return and devour them. The rook, also (*Corvus americanus*), does the same, and so do some squirrels and other Rodentia; and they plant them so deep, that they will not shoot unless the air and the sun's rays can penetrate freely into the soil, as when the shade of the pine trees has been entirely removed. It must occasionally happen, that birds or quadrupeds, which might otherwise have returned to feed on the hidden treasure, are killed by some one of their numerous enemies. But as the seeds of pines must be infinitely more

abundant than the acorns, we have still to explain what principle in vegetable life favors the rotation. Liebig adopts De Candolle's theory, as most probable. He supposes that the roots of plants imbibe soluble matter of every kind from the soil, and absorb many substances not adapted for their nutrition, which are subsequently expelled by the roots, and returned to the soil as excrements. Now, as excrements cannot be assimilated by the plant which ejected them, the more of these matters the soil contains, the less fertile must it become for plants of the same species. These exudations, however, may be capable of assimilation by another perfectly different kind or family of plants, which would flourish while taking them up from the soil, and render the soil, in time, again fertile for the first plants. "During a fallow," says Liebig, "the action of the sun and atmosphere, especially if not intercepted by the growth of weeds, causes the decomposition of the excrementitious matters, and converts the soil into humus or vegetable mold, restoring fertility."*

In one part of the pine forest I saw the Liquidambar tree growing vigorously fifty feet high, with a bark resembling cork. The bird of brightest plumage was the one called the red bird, or red cardinal (*Loxia cardinalis*), which has a full, clear, and mellow note, though no variety of song. It frequents bushes in the neighborhood of houses, where it comes to be fed, but will not thrive in captivity. One day, a son of Mr. Couper's brought us a hen cardinal bird and a wild partridge, both taken uninjured in a snare. It was amusing to contrast the extreme fierceness of the cardinal with the mildness and gentleness of the partridge. That insects, birds, and quadrupeds, of the same genera, but of distinct species, discharge similar functions in America and Europe, is well known. My attention was called here to some thorny bushes, on which the shrike or loggerhead (*Lanius ludovicianus*) had impaled small lizards, frogs, and beetles, just as I have seen mice and insects fixed on thorns by our English shrikes. Here, also, the marshes near the river are frequented by the belted kingfisher (*Alcedo alcyon*), resembling

* Liebig's Organic Chemistry, pt. i. ch. 8.

in plumage, though not so brilliant as the English kingfisher, which yet lingers, in spite of persecution, in the reedy islands of the Thames above London. Mr. Couper tells me, that the American bird dives after its prey, like that of Europe, and will often carry a fish, not much smaller than itself, and beat it against the stump of a tree, first on one side, then on the other, till every bone in its body is broken; it can then swallow it, in spite of its size.

A few days after our arrival (January 4, 1846), Mr. Couper took us in a canoe down the river from Hopeton to one of the sea-islands, called St. Simon's, fifteen miles distant, to visit his summer residence, and to give me an opportunity of exploring the geology of the coast and adjoining low country. We saw, on the banks of the river, the *Magnolia glauca*, attaining a height of thirty feet, instead of being only ten feet high, as in the swamps of New England. The gum tree (*Nyssa aquatica*), out of leaf at this season, was conspicuous, from the manner in which the smooth trunk swells out at the base, being partially hollow in the interior, so that it is often used by the negroes for bee-hives. Jays and blue-birds were very abundant, and there were several large hawks' nests on the tops of tall dead trees.

Among the zoological characteristics of the North American rivers, none is more remarkable than the variety of species of shells of the genus *Unio*, or fresh-water mussel, which inhabit them. Every great stream yields some new forms, and Mr. Couper has already discovered in the Altamaha no less than sixteen species before unknown; one of these, *Unio spinosus*, has a singular appearance, being armed with spines, standing out horizontally from the shell, and probably acting as a defense against some enemy.

On our way we landed on Butler's Island, where the banks of the river, as is usual in deltas, are higher than the ground immediately behind them. They are here adorned with orange trees, loaded with golden fruit, and very ornamental. We saw ricks of rice raised on props five feet high, to protect them from the sea, which, during hurricanes, has been known to rise five or

six feet. The negro houses were neat, and whitewashed, all floored with wood, each with an apartment called the hall, two sleeping-rooms, and a loft for the children; but it is evident that on these rice farms, where the negroes associate with scarcely any whites, except the overseer and his family, and have but little intercourse with the slaves of other estates, they must remain far more stationary than where, as in a large part of Georgia, they are about equal in number to the whites, or even form a minority. The negroes, moreover, in the interior, are healthier than those in rice plantations, and multiply faster, although the rice grounds are salubrious to the negroes as compared to the whites. In this lower region the increase of the slaves is rapid, for they are well fed, fitted for a southern climate, and free from care, partly, no doubt, because of their low mental development, and partly because they and their children are secured from want. Such advantages, however, would be of no avail, in rendering them prolific, if they were overworked and harshly treated.

As we approached the sea and the brackish water, the wood bordering the river began first to grow dwarfish, and then, lowering suddenly, to give place entirely to reeds; but still we saw the buried stumps and stools of the cypress and pine continuing to show themselves in every section of the bank, maintaining the upright position in which they originally grew. The occurrence of these in the salt marshes clearly demonstrates that trees once flourished where they would now be immediately killed by the salt water. There must have been a change in the relative level of land and sea, to account for their growth, since, even above the commencement of the brackish water, similar stumps are visible at a lower level than the present high tide, and covered by layers of sedimentary matter, on which tall cypresses and other trees are now standing. From such phenomena we may infer the following sequence of events:—first, an ancient forest was submerged several feet, and the sunk trees were killed by the salt water; they then rotted away down to the water level (a long operation), after which layers of sand were thrown down upon the stumps; and finally, when the surface had been

raised by fluviatile sediment, as in a delta, a new forest grew up over the ruins of the old one.

I have said that the decay of such timber is slow, for I saw cypresses at Hopeton, which had been purposely killed by girdling or cutting away a ring of bark, which stood erect on the borders of the rice grounds after thirty years, and bid fair to last for many a year to come. It does no small credit to the sagacity of Bartram, the botanist, that he should have remarked, when writing in 1792, that the low, flat islands on the coast, as well as the salt marshes and adjoining sandy region, through which so many rivers wind, and which afford so secure a navigation for schooners, boats, and canoes, may be a step in advance gained by the continent on the Atlantic in modern times. "But if so," he adds, "it is still clear that, at a period immediately preceding, the same region of low land stretched still farther out to sea." On the latter subject his words are so much to the point, as to deserve being quoted :—

"It seems evident, even to demonstration, that those salt marshes adjoining the coast of the main, and the reedy and grassy islands and marshes in the rivers, which are now overflowed at every tide, were formerly high swamps of firm land, affording forests of cypress, tupelo, magnolia grandiflora, oak, ash, sweet bay, and other timber trees, the same as are now growing on the river swamps, whose surface is two feet or more above the spring tides that flow at this day. And it is plainly to be seen by every planter along the coast of Carolina, Georgia, and Florida, to the Mississippi, when they bank in these grassy tide marshes for cultivation, that they can not sink their drains above three or four feet below the surface, before they come to strata of cypress stumps and other trees, as close together as they now grow in the swamps."*

When our canoe had proceeded into the brackish water, where the river banks consisted of marsh land covered with a tall reed-like grass, we came close up to an alligator, about nine feet long, basking in the sun. Had the day been warmer, he would not

* W. Bartram's Travels through North and South Carolina, Georgia, &c. London, 1792.

have allowed us to approach so near to him; for these reptiles are much shyer than formerly, since they have learnt to dread the avenging rifle of the planter, whose stray hogs and sporting dogs they often devour. About ten years ago, Mr. Couper tells us, that he saw 200 of them together in St. Mary's River, in Florida, extremely fearless. The oldest and largest individuals on the Altamaha have been killed, and they are now rarely twelve feet long, and never exceed sixteen and a half feet. As almost all of them have been in their winter retreats ever since the frost of last month, I was glad that we had surprised one in his native haunts, and seen him plunge into the water by the side of our boat. When I first read Bartram's account of alligators more than twenty feet long, and how they attacked his boat and bellowed like bulls, and made a sound like distant thunder, I suspected him of exaggeration; but all my inquiries here and in Louisiana convinced me that he may be depended upon. His account of the nests which they build in the marshes is perfectly correct. They resemble haycocks, about four feet high, and five feet in diameter at their bases, being constructed with mud, grass, and herbage. First they deposit one layer of eggs on a floor of mortar, and having covered this with a second stratum of mud and herbage eight inches thick, lay another set of eggs upon that, and so on to the top, there being commonly from one hundred to two hundred eggs in a nest. With their tails they then beat down round the nest the dense grass and reeds, five feet high, to prevent the approach of unseen enemies. The female watches her eggs until they are all hatched by the heat of the sun, and then takes her brood under her care, defending them, and providing for their subsistence.* Dr. Luzenberger, of New Orleans, told me that he once packed up one of these nests, with the eggs, in a box for the Museum of St. Petersburgh, but was recommended, before he closed it, to see that there was no danger of any of the eggs being hatched on the voyage. On opening one, a young alligator walked out, and was soon after followed by all the rest, about a hundred, which he fed in his house, where they went up and down the stairs, whining and barking

* Bartram, p. 126.

like young puppies. They ate voraciously, yet their growth was so slow, as to confirm him in the common opinion, that individuals which have attained the largest size are of very great age; though whether they live for three centuries, as some pretend, must be decided by future observations.

Mr. Couper told me that, in the summer of 1845, he saw a shoal of porpoises coming up to that part of the Altamaha where the fresh and salt water meet, a space about a mile in length, the favorite fishing ground of the alligators, where there is brackish water, which shifts its place according to the varying strength of the river and the tide. Here were seen about fifty alligators, each with head and neck raised above water, looking down the stream at their enemies, before whom they had fled, terror-stricken, and expecting an attack. The porpoises, no more than a dozen in number, moved on in two ranks, and were evidently complete masters of the field. So powerful, indeed, are they, that they have been known to chase a large alligator to the bank, and, putting their snouts under his belly, toss him ashore.

We landed on the northeast end of St. Simon's Island, at Cannon's Point, where we were gratified by the sight of a curious monument of the Indians, the largest mound of shells left by the aborigines in any one of the sea islands. Here are no less than ten acres of ground elevated in some places ten feet, and on an average over the whole area, five feet above the general level, composed throughout that depth of myriads of cast-away oyster-shells, with some mussels, and here and there a modiola and helix. They who have seen the Monte Testaceo near Rome, know what great results may proceed from insignificant causes, where the cumulative power of time has been at work, so that a hill may be formed out of the broken pottery rejected by the population of a large city. To them it will appear unnecessary to infer, as some antiquaries have done, from the magnitude of these Indian mounds, that they must have been thrown up by the sea. In refutation of such an hypothesis, we have the fact, that flint arrow-heads, stone axes, and fragments of Indian pottery have been detected throughout the mass. The shell-fish heaped up at Cannon's Point, must, from their nature, have been caught at a

distance, on one of the outer islands; and it is well known that the Indians were in the habit of returning with what they had taken, from their fishing excursions on the coast, to some good hunting ground, such as St. Simon's afforded.

We found Mr. Couper's villa, near the water's edge, shaded by a verandah and by a sago tree. There were also many lemon trees, somewhat injured by the late frost; but the olives, of which there is a fine grove here, are unharmed, and it is thought they may one day be cultivated with profit in the sea islands. We also admired five date palms, which bear fruit. They were brought from Bussora in Persia, and have not suffered by the cold. The oranges have been much hurt. Some of the trees planted by Oglethorpe's troops in 1742, after flourishing for ninety-three years, were cut off in February, 1835, and others, about a century and a half old, shared the same fate at St. Augustine in Florida. So long a period does it require to ascertain whether the climate of a new country is suitable to a particular species of plant.

The evergreen or live oaks are truly magnificent in this island; some of them, 73 feet in height, have been found to stretch with their boughs over an area 63 feet in diameter. I measured one which was thirty-five years old, and found the trunk to be just 35 inches in diameter near the base, showing an annual gain of three inches in circumference. Another, growing in a favorable situation, forty-two years old, was nine feet six inches in girth at the height of one and a half foot above the ground.

The island of St. Simon's is so low, that the lower part of it was under water in 1804 and 1824, when hurricanes set in with the wind from the northeast. Nearly the entire surface was submerged in 1756. In that year the sea rose, even as far north as Charleston, to the height of six feet above its ordinary level, and that city might have been destroyed, had the gale lasted in the same direction a few hours longer.

I went with Mr. Couper to Long Island, the outermost barrier of land between St. Simon's and the ocean, four miles long, and about half a mile wide, of recent formation, and consisting of parallel ranges of sand dunes, marking its growth by successive additions. Some of the dunes on this coast have been raised by

the wind to the height of 40 or 50 feet, and inclose evergreen oaks (*Quercus virens*), the upper branches of which alone protrude above the surface. Between the parallel sand dunes were salt marshes, where we collected the plant-eating shell called *Auricula bidentata*, of a genus peculiar to such littoral situations. On the sea-beach, we gathered no less than twenty-nine species of marine shells, and they were of peculiar interest to me, because they agreed specifically with those which I had obtained from the strata lying immediately below the megatherium and other fossils in Skiddaway Island, and which occur below similar remains presently to be mentioned near Hopeton. In some places we found bivalves only of the genera *Pholas*. *Lutraria*, *Solecurtus*, *Petricola*, *Tellina*, *Donax*, *Venus*, *Cardium*, *Arca*, *Pinna*, and *Mytilus*, just as in the fossil group. On other parts of the beach there was a mixture of univalves, *Oliva*, *Pyrula* (Fulgur), *Buccinum*, &c. Besides these shells we found, scattered over the sands, a scutella and cases of the king crab (*Limulus*), and fragments of turtles, with bones of porpoises.

Every geologist who has examined strata consisting of alternations of sandstone and shale, must occasionally have observed angular or rounded pieces of the shale imbedded in the sandstones, a phenomenon which seems at first sight very singular, because we might almost say that the formation is in part made up of its own ruins, and not derived wholly from pre-existing rocks. On the exposed coast of this "frontier island," I saw a complete explanation of the manner in which this structure originates. Deposits of sand and beds of clay are formed alternately at different seasons, and at the time of our visit the sea was making great inroads on an argillaceous mass, washing out pieces of the half-consolidated clay, and strewing them over the sands, some flat, others angular, or rolled into various sized pebbles. These, when carried out into the adjoining parts of the sea, must be often included in the sand, which may be eventually converted into sandstone.

Among the numerous sea birds, I particularly admired one called the sheer-water, with its shrill clear note, and most rapid flight.

On my return to Cannon's Point, I found, in the well-stored

library of Mr. Couper, Audubon's Birds, Michaud's Forest Trees, and other costly works on natural history; also Catherwood's Antiquities of Central America, folio edition, in which the superior effect of the larger drawings of the monuments of Indian architecture struck me much, as compared to the reduced ones, given in Stephens's Central America, by the same artist, although these also are very descriptive.

During our excursion to the sea-beach, my wife had been visited by some ladies well acquainted with relations of her own, who formerly resided in this part of Georgia, and who, when they returned to England, had taken back with them an old negress. One of the colored maid-servants of the ladies, feeling no doubt that Mrs. W——, although she had recrossed the Atlantic, would be as much interested as ever in her history, sent innumerable messages, beginning with, "Pray tell her that Mrs. A. has given me and my children to Mrs. B." They were all very curious to know about their former friend, Delia, the black maid, and how she had got on in England. On being told that she had been shocked at seeing so many beggars, and had scolded them for not working, they laughed heartily, saying it was so like her to scold; but they also expressed astonishment at the idea of a white mendicant, there being none, so far as they knew, white or colored, in Georgia. One of the ladies explained the term "beggar" to signify in England, a "mean white person;" and said to an attendant who had once accompanied her to the north, "Do you not remember some *mean white* men, who asked me for money?" Talking over this story in Alabama, I was told that mendicity is not so entirely unknown in the south; that a superannuated negress, having a love of rambling, and wishing to live by begging, asked her master to set her free, "for when I beg, every one asks me why I do not go to my owner." "What will you do in winter," said he, "when you can not travel about?" "I will come back to you then," she replied, "and you will take care of me in the cold weather."

The sea islands produce the finest cotton, and we saw many women employed in separating the cotton from the seeds with their fingers, a neat and clean occupation.

CHAPTER XIX.

Rivers made turbid by the Clearing of Forests.—Land rising in successive Terraces.—Origin of these.—Bones of extinct Quadrupeds in Lower Terrace.—Associated Marine Shells.—Digging of Brunswick Canal.—Extinction of Megatherium and its Contemporaries.—Dying out of rare Species.—Gordonia Pubescens.—Life of Southern Planters.—Negroes on a Rice Plantation.—Black Children.—Separate Negro Houses.—Work exacted.—Hospital for Negroes.—Food and Dress.—Black Driver.—Prevention of Crimes.—African Tom.—Progress of Negroes in Civilization.—Conversions to Christianity.—Episcopalian, Baptist, and Methodist Missionaries.—Amalgamation and Mixture of Races.

We returned from St. Simon's to Hopeton, much pleased with our expedition. As our canoe was scudding through the clear waters of the Altamaha, Mr. Couper mentioned a fact which shows the effect of herbage, shrubs, and trees in protecting the soil from the wasting action of rain and torrents. Formerly, even during floods, the Altamaha was transparent, or only stained of a darker color by decayed vegetable matter, like some streams in Europe which flow out of peat mosses. So late as 1841, a resident here could distinguish on which of the two branches of the Altamaha, the Oconee or Ocmulgee, a freshet had occurred, for the lands in the upper country, drained by one of these (the Oconee) had already been partially cleared and cultivated, so that that tributary sent down a copious supply of red mud, while the other (the Ocmulgee) remained clear, though swollen. But no sooner had the Indians been driven out, and the woods of their old hunting-grounds begun to give way before the ax of the new settler, than the Ocmulgee also became turbid. I shall have occasion, in the sequel, to recur to this subject, when speaking of some recently-formed ravines of great depth and width in the red mud of the upland country near Milledgeville in Georgia.

The low region bordering the Atlantic, comprising the sea-islands, such as St. Simon's, and the flat or nearly level plains

of the main land immediately adjoining, has an average height of from ten to twenty feet, although there are a few places where it reaches forty feet, above the sea. It extends twenty miles inland, and consists of sand and clay of very modern formation, as shown by the included marine shells, which are like those of Skiddaway, before mentioned,* all identical with living species. This superficial deposit, although chiefly marine, contains, in some parts, beds of fresh-water origin, in which the bones of extinct mammalia occur. The whole group would be called by geologists fluvio-marine, and is of small depth, resting immediately on Eocene, or lower tertiary strata, as I ascertained by examining the shells brought up from several wells. Going inland twenty miles, we come to the termination of this lower terrace, and ascend abruptly to an upper platform, seventy feet above the lower one, the strata composing which belong to the Eocene period. This upper terrace also runs back about twenty miles to the abrupt termination of a third table-land, which is also about seventy feet higher, and consists of Eocene strata, by the denudation of which all these terraces and escarpments (or ancient sea-cliffs) have been formed. Bartram has, with his usual accuracy, alluded to these steps, or succession of terraces, as an important geographical feature of the country, each of them being marked by its own botanical characters, the prevailing forest-trees, as well as the smaller plants, being different in each.

To return to the first platform, or lowest land, from ten to forty feet above the level of the sea, it consists of a modern deposit, which extends 400 miles northward to the Neuse in North Carolina, and probably farther, in the same direction, along the Atlantic border. How far it stretches southward, I am not informed. I conceive it to have been accumulated in a sea, into which many rivers poured during a gradual subsidence of the land, and that the strata, whether fresh-water or marine, formed during the sinking of the bottom of the sea, have been since brought up again to their present elevation. Throughout this low, flat region, the remains of extinct quadrupeds are occasionally met with, and the deposit appears to be very analogous to

* Ante, p. 234.

the great Pampean formation on the borders of the Atlantic in South America, as described by Mr. Darwin. Here and in the Pampas the skeletons of many quadrupeds of the same genera, such as the *Megatherium*, *Megalonyx*, *Mylodon*, *Mastodon*, and *Equus* occur. In both cases it has been proved that the mammalia, all of which differ specifically, and most of them generically, from those now living, flourished, nevertheless, at a time when the Atlantic was inhabited by the existing species of mollusca, and when the climate, therefore, of the ocean at least, could not have varied materially from that now prevailing in these latitudes.

Through part of the region occupied by the modern deposits above mentioned, a canal was cut in 1838–39, nine miles in length, called the Brunswick Canal, to unite the navigation of the Altamaha and Turtle rivers; a rash undertaking of some speculators from the northern states, which, had the work been completed, could not have repaid the outlay. About 200,000*l.* (900,000 dollars) were expended, a sum which might have gone far toward obtaining geological surveys of many of the southern states, whereas the only good result was the discovery of some valuable fossil remains; and even these fruits of the enterprise would never have been realized, but for the accidental presence, energy, and scientific knowledge of Mr. Hamilton Couper. Part of the skeleton of a megatherium, dug out in cutting the canal, was so near the surface, that it was penetrated by the roots of a pine-tree. It occurred in clay, apparently a fresh-water deposit, and underneath it were beds of sand, with marine shells of recent species. It was also covered with sand, probably marine, but without shells. So many parts of the same skeleton were found in juxtaposition as to suggest the idea that a whole carcass had been floated by the river to the spot, and even where the bones were slightly scattered they were not injured by being rolled. The remains of other quadrupeds associated with this gigantic sloth, consisted of mylodon, mastodon, elephant, equus, and bos, besides a fossil, to which Mr. Owen has given the name of *Harlanus americanus*, a new genus, intermediate between *Lophiodon* and *Toxodon*. It had been supposed that the hippopotamus and

sus were among this assemblage of fossil genera: but this was a mistake; nor have either of these genera been as yet met with, fossil or recent, in any part of America, although the swine introduced by man, have multiplied so fast. The horse (*Equus curvidens*) was a species having teeth in the upper jaw more curved than any living horse, ass, zebra, or quagga; and it is singular that, although there was no wild representative of the horse tribe on the American continent, north or south, when discovered by the Europeans, yet two other fossil horses were found by Mr. Nuttall on the banks of the Neuse, fifteen miles below Newbern, in North Carolina.* The shells and bones of a large extinct species of tortoise were also found to accompany the above-mentioned fossil quadrupeds of Georgia; and I myself picked up many fragments of this Chelonian strewed over the banks of earth cast up from the Brunswick Canal.

In another part of the excavations made in digging the canal, the ribs and vertebræ of a whale much rolled, and with barnacles attached to them, were discovered belonging to the subjacent marine formation. In this sand the shells, as before stated, are of recent species, and Mr. Hamilton Couper has collected no less than forty-five distinct species exclusive of Echinoderms.

In what manner, then, has the destruction of these quadrupeds, once so widely spread over the American continent, been brought about? That they were exterminated by the arrows of the Indian hunter, is the first idea presented to the mind of almost every naturalist. But the investigations of Lund and Clausen in the limestone caves of Brazil have established the fact, that with the large mammalia there were associated a great many smaller quadrupeds, some of them as diminutive as field mice, which have all died out together, while the land shells, once their contemporaries, still continue to exist in the same countries. We must look, therefore, to causes more general and powerful than the intervention of man, to account for the disappearance of the ancient fauna, an event the more remarkable, as many of the

* Mr. Conrad intrusted me with Mr. Nuttall's collection, and Mr. Owen has found among them the three species of Equidæ here alluded to, *Equus curvidens*, *E. plicidens*, and a third species of the size of *E. asinus*.

species had a very wide range, and must therefore have been capable of accommodating themselves to considerable variations of temperature. The same species of megatherium, for example, ranged from Patagonia and the river Plata in South America, between latitudes 31° and 50° south, to corresponding latitudes of the northern continent, and was also an inhabitant of the intermediate country of Brazil, in the caves of which its fossil remains are met with. The extinct elephant also of Georgia (*Elephas primigenius*) has been traced in a fossil state northward from the Altamaha to the Polar regions, and then southwestward through Siberia to the south of Europe.

As to the exterminating causes, I agree with Mr. Darwin, that it is the height of presumption for any geologist to be astonished that he can not render an account of them. No naturalist can pretend to be so well acquainted with all the circumstances on which the continuance upon the earth of any living species depends, as to be entitled to wonder if it should diminish rapidly in number or geographical range. But if his speculations should embrace a period in which considerable changes in physical geography are known to have occurred, as is the case in North and South America since the megatherium flourished, how much more difficult would it be to appreciate all the effects of local modifications of climate, and changes in the stations of contemporary animals and plants, on all which, and many other conditions, the permanence of a species must depend. Until we understand the physiological constitutions of organic beings so well that we can explain why an epidemic or contagious disease may rage for months or years, and cut off a large proportion of the living individuals of one species while another is spared, how can we hope to explain why, in the great struggle for existence, some species are multiplying, while others are decreasing in number? "If," says Darwin, "two species of the same genus, and of closely allied habits, people the same district, and we can not say why one of them is rare and the other common, what right have we to wonder if the rarer of the two should cease to exist altogether?"

In illustration of this principle, I may refer to two beautiful evergreens flourishing in this part of Georgia, species of *Gordonia*

(or *Franklinia* of Bartram), a plant allied to the camellia. One of these I saw every where in the swamps near the Altamaha, where it is called the loblolly bay (*Gordonia lasiantlus*), forty feet high, and even higher, with dark green leaves, and covered, I am told, in the flowering season, with a profusion of milk-white, fragrant blossoms. This plant has a wide range in the southern states, whereas the other, *G. pubescens*, often seen in greenhouses in England, about thirty feet high, is confined, as I am informed by Mr. Couper, to a very limited area, twenty miles in its greatest length, the same region where Bartram first discovered it, seventy years ago, near Barrington Ferry, on the Altamaha.* In no other spot in the whole continent of America has it ever been detected. If we were told that one of these two evergreens was destined in the next 2000 or 3000 years to become extinct, how could we conjecture which of them would endure the longest? We ought to know first whether the area occupied by the one has been diminishing, and that of the other increasing, and then which of the two plants has been on the advance. But even then we should require to foresee a countless number of other circumstances in the animate and inanimate world affecting the two species, before we could make a probable guess as to their comparative durability. A single frost more severe than that before alluded to, which cut off the orange-trees in Florida after they had lasted a century and a half, might baffle all our calculations; or the increase of some foe, a minute parasitic insect perhaps, might entirely alter the conditions on which the existence of these or any other trees, shrubs, or quadrupeds depend.

During a fortnight's stay at Hopeton, we had an opportunity of seeing how the planters live in the south, and the condition and prospects of the negroes on a well-managed estate. The relation of the slaves to their owners resembles nothing in the northern states. There is an hereditary regard and often attachment on both sides, more like that formerly existing between lords and their retainers in the old feudal times of Europe, than to any thing now to be found in America. The slaves identify

* Bartram, pp. 159, 465.

themselves with the master, and their sense of their own importance rises with his success in life. But the responsibility of the owners is felt to be great, and to manage a plantation with profit is no easy task; so much judgment is required, and such a mixture of firmness, forbearance, and kindness. The evils of the system of slavery are said to be exhibited in their worst light when new settlers come from the free states; northern men, who are full of activity, and who strive to make a rapid fortune, willing to risk their own lives in an unhealthy climate, and who can not make allowance for the repugnance to continuous labor of the negro race, or the diminished motive for exertion of the slave. To one who arrives in Georgia direct from Europe, with a vivid impression on his mind of the state of the peasantry there in many populous regions, their ignorance, intemperance, and improvidence, the difficulty of obtaining subsistence, and the small chance they have of bettering their lot, the condition of the black laborers on such a property as Hopeton, will afford but small ground for lamentation or despondency. I had many opportunities, while here, of talking with the slaves alone, or seeing them at work. I may be told that this was a favorable specimen of a well-managed estate; if so, I may at least affirm that mere chance led me to pay this visit, that is to say, scientific objects wholly unconnected with the "domestic institutions" of the south, or the character of the owner in relation to his slaves; and I may say the same in regard to every other locality or proprietor visited by me in the course of this tour. I can but relate what passed under my own eyes, or what I learnt from good authority, concealing nothing.

There are 500 negroes on the Hopeton estate, a great many of whom are children, and some old and superannuated. The latter class, who would be supported in a poor-house in England, enjoy here, to the end of their days, the society of their neighbors and kinsfolk, and live at large in separate houses assigned to them. The children have no regular work to do till they are ten or twelve years old. We see that some of them, at this season, are set to pick up dead leaves from the paths, others to attend the babies. When the mothers are at work, the young

children are looked after by an old negress, called Mom Diana. Although very ugly as babies, they have such bright, happy faces when three or four years old, and from that age to ten or twelve have such frank and confiding manners, as to be very engaging. Whenever we met them, they held out their hands to us to shake, and when my wife caressed them, she was often asked by some of the ladies, whether she would not like to bring up one of the girls to love her, and wait upon her. The parents indulge their own fancies in naming their children, and display a singular taste; for one is called January, another April, a third Monday, and a fourth Hard Times. The fisherman on the estate rejoices in the appellation of "Old Bacchus." Quash is the name of the favorite preacher, and Bulally the African name of another negro.

The out-door laborers have separate houses provided for them; even the domestic servants, except a few who are nurses to the white children, live apart from the great house—an arrangement not always convenient for the masters, as there is no one to answer a bell after a certain hour. But if we place ourselves in the condition of the majority of the population, that of servants, we see at once how many advantages we should enjoy over the white race in the same rank of life in Europe. In the first place, all can marry; and if a mistress should lay on any young woman here the injunction so common in English newspaper advertisements for a maid of all work, "no followers allowed," it would be considered an extraordinary act of tyranny. The laborers begin work at six o'clock in the morning, have an hour's rest at nine for breakfast, and many have finished their assigned task by two o'clock, all of them by three o'clock. In summer they divide their work differently, going to bed in the middle of the day, then rising to finish their task, and afterward spending a great part of the night in chatting, merry-making, preaching, and psalm-singing. At Christmas they claim a week's holidays, when they hold a kind of Saturnalia, and the owners can get no work done. Although there is scarcely any drinking, the master rejoices when this season is well over without mischief. The negro houses are as neat as the greater part of the cottages

in Scotland (no flattering compliment it must be confessed), are provided always with a back door, and a hall, as they call it, in which is a chest, a table, two or three chairs, and a few shelves for crockery. On the door of the sleeping apartment they keep a large wooden padlock, to guard their valuables from their neighbors when they are at work in the field, for there is much pilfering among them. A little yard is often attached, in which are seen their chickens, and usually a yelping cur, kept for their amusement.

The winter, when the whites enjoy the best health, is the trying season for the negroes, who are rarely ill in the rice-grounds in summer, which are so fatal to the whites, that when the planters who have retreated to the sea-islands revisit their estates once a fortnight, they dare not sleep at home. Such is the indifference of the negroes to heat, that they are often found sleeping with their faces upward in a broiling sun, instead of lying under the shade of a tree hard by. We visited the hospital at Hopeton, which consists of three separate wards, all perfectly clean and well-ventilated. One is for men, another for women, and a third for lying-in women. The latter are always allowed a month's rest after their confinement, an advantage rarely enjoyed by hard-working English peasants. Although they are better looked after and kept more quiet, on these occasions, in the hospital, the planters are usually baffled; for the women prefer their own houses, where they can gossip with their friends without restraint, and they usually contrive to be taken by surprise at home.

The negro mothers are often so ignorant or indolent, that they can not be trusted to keep awake and administer medicine to their own children; so that the mistress has often to sit up all night with a sick negro child. In submitting to this, they are actuated by mixed motives—a feeling of kindness, and a fear of losing the services of the slave; but these attentions greatly attach the negroes to their owners. In general, they refuse to take medicine from any other hands but those of their master or mistress. The laborers are allowed Indian meal, rice, and milk, and occasionally pork and soup. As their rations are more than

they can eat, they either return part of it to the overseer, who makes them an allowance of money for it at the end of the week, or they keep it to feed their fowls, which they usually sell, as well as their eggs, for cash, to buy molasses, tobacco, and other luxuries. When disposed to exert themselves, they get through the day's task in five hours, and then amuse themselves in fishing, and sell the fish they take; or some of them employ their spare time in making canoes out of large cypress trees, leave being readily granted them to remove such timber, as it aids the landowner to clear the swamps. They sell the canoes for about four dollars, for their own profit.

If the mistress pays a visit to Savannah, the nearest town, she is overwhelmed with commissions, so many of the slaves wishing to lay out their small gains in various indulgences, especially articles of dress, of which they are passionately fond. The stuff must be of the finest quality, and many instructions are given as to the precise color or fashionable shade. White muslin, with figured patterns, is the rage just now.

One day, when walking alone, I came upon a "gang" of negroes, who were digging a trench. They were superintended by a black "driver," who held a whip in his hand. Some of the laborers were using spades, others cutting away the roots and stumps of trees which they had encountered in the line of the ditch. Their mode of proceeding in their task was somewhat leisurely, and eight hours a day of this work are exacted, though they can accomplish the same in five hours, if they undertake it by the task. The digging of a given number of feet in length, breadth, and depth is, in this case, assigned to each ditcher, and a deduction made when they fall in with a stump or root. The names of gangs and drivers are odious, and the sight of the whip was painful to me as a mark of degradation, reminding me that the lower orders of slaves are kept to their work by mere bodily fear, and that their treatment must depend on the individual character of the owner or overseer. That the whip is rarely used, and often held for weeks over them, merely *in terrorem*, is, I have no doubt, true on all well governed estates; and it is not that formidable weapon which I have seen exhibited as formerly

in use in the West Indies. It is a thong of leather, half an inch wide and a quarter of an inch thick. No ordinary driver is allowed to give more than six lashes for any offense, the head driver twelve, and the overseer twenty-four. When an estate is under superior management, the system is remarkably effective in preventing crime. The most severe punishment required in the last forty years, for a body of 500 negroes at Hopeton, was for the theft of one negro from another. In that period there has been no criminal act of the highest grade, for which a delinquent could be committed to the penitentiary in Georgia, and there have been only six cases of assault and battery. As a race, the negroes are mild and forgiving, and by no means so prone to indulge in drinking as the white man or the Indian. There were more serious quarrels, and more broken heads, among the Irish in a few years, when they came to dig the Brunswick Canal, than had been known among the negroes in all the surrounding plantations for half a century. The murder of a husband by a black woman, whom he had beat violently, is the greatest crime remembered in this part of Georgia for a great length of time.

Under the white overseer, the principal charge here is given to "Old Tom," the head driver, a man of superior intelligence and higher cast of feature. He was the son of a prince of the Foulah tribe, and was taken prisoner, at the age of fourteen, near Timbuctoo. The accounts he gave of what he remembered of the plants and geography of Africa, have been taken down in writing by Mr. Couper, and confirm many of the narratives of modern travelers. He has remained a strict Mahometan, but his numerous progeny of jet-black children and grandchildren, all of them marked by countenances of a more European cast than those of ordinary negroes, have exchanged the Koran for the Bible.

During the last war, when Admiral Cockburn was off this coast with his fleet, he made an offer of freedom to all the slaves belonging to the father of my present host, and a safe convoy to Canada. Nearly all would have gone, had not African Tom, to whom they looked up with great respect, declined the proposal. He told them he had first known what slavery was in the West

Indies, and had made up his mind that the English were worse masters than the Americans. About half of them, therefore, determined to stay in St. Simon's Island, and not a few of the others who accepted the offer and emigrated, had their lives shortened by the severity of the climate in Canada.

The slave trade ceased in 1796, and but few negroes were afterward smuggled into Georgia from foreign countries, except indirectly for a short time through Florida before its annexation; yet one fourth of the population of this lower country is said to have come direct from Africa, and it is a good sign of the progress made in civilization by the native-born colored race, that they speak of these "Africanians" with much of the contempt with which Europeans talk of negroes.

I was agreeably surprised to see the rank held here by the black mechanics. One day I observed a set of carpenters putting up sluices, and a lock in a canal of a kind unknown in this part of the world. The black foreman was carrying into execution a plan laid down for him on paper by Mr. Couper, who had observed it himself many years ago in Holland. I also saw a steam-engine, of fifteen horse power, made in England by Bolton and Watt, and used in a mill for threshing rice, which had been managed by a negro for more than twelve years without an accident. When these mechanics come to consult Mr. Couper on business, their manner of speaking to him is quite as independent as that of English artisans to their employers. Their aptitude for the practice of such mechanical arts may encourage every philanthropist who has had misgivings in regard to the progressive powers of the race, although much time will be required to improve the whole body of negroes, and the movement must be general. One planter can do little by himself, so long as education is forbidden by law. I am told that the old colonial statutes against teaching the slaves to read were almost in abeyance, and had become a dead letter, until revived by the reaction against the Abolition agitation, since which they have been rigorously enforced and made more stringent. Nevertheless, the negroes are often taught to read, and they learn much in Sunday schools, and for the most part are desirous of instruction.

In the hope of elevating the character of some of his negroes, and giving them more self-dependence, Mr. Couper, by way of experiment, set apart a field for the benefit of twenty-five picked men, and gave up to them half their Saturday's labor to till it. In order that they might know its value, they were compelled to work on it for the first year, and the product, amounting to 1500 dollars, was divided equally among them. But when, at length, they were left to themselves, they did nothing, and at the end of two years the field was uncultivated. But there appears to me nothing disheartening in this failure, which may have been chiefly owing to their holding the property in common, a scheme which was found not to answer even with the Pilgrim Fathers when they first colonized Plymouth—men whom certainly none will accuse of indolence or a disposition to shrink from continuous labor. The "dolce far niente" is doubtless the negro's paradise, and I once heard one of them singing with much spirit at Williamsburg an appropriate song:—

> "Old Virginia never tire,
> Eat hog and hominy, and lie by the fire;"

and it is quite enough that a small minority should be of this mind, to make all the others idle and unwilling to toil hard for the benefit of the sluggards.

When conversing with different planters here, in regard to the capabilities and future progress of the black population, I find them to agree very generally in the opinion that in this part of Georgia they appear under a great disadvantage. In St. Simon's island it is admitted, that the negroes on the smaller estates are more civilized than on the larger properties, because they associate with a greater proportion of whites. In Glynn County, where we are now residing, there are no less than 4000 negroes to 700 whites; whereas in Georgia generally there are only 281,000 slaves in a population of 691,000, or more whites than colored people. Throughout the upper country there is a large preponderance of Anglo-Saxons, and a little reflection will satisfy the reader how much the education of a race which starts originally from so low a stage of intellectual, social, moral, and

spiritual development, as the African negro, must depend not on learning to read and write, but on the amount of familiar intercourse which they enjoy with individuals of a more advanced race. So long as they herd together in large gangs, and rarely come into contact with any whites save their owner and overseer, they can profit little by their imitative faculty, and can not even make much progress in mastering the English language, that powerful instrument of thought and of the communication of ideas, which they are gaining in exchange for the limited vocabulary of their native tribes. Yet, even in this part of Georgia, the negroes are very far from stationary, and each generation is acquiring habits of greater cleanliness and propriety of behavior, while some are learning mechanical arts, and every year many of them becoming converts to Christianity.

Although the Baptist and Methodist missionaries have been the most active in this important work, the Episcopalians have not been idle, especially since Dr. Elliott became Bishop of Georgia, and brought his talents, zeal, and energy to the task. As he found that the negroes in general had no faith in the efficacy of baptism except by complete immersion, he performed the ceremony as they desired. Indeed, according to the old English rubric, all persons were required to be immersed in baptism, except when they were sick, so that to lose converts by not complying with this popular notion of the slaves, would hardly have been justifiable. It may be true that the poor negroes cherish a superstitious belief that the washing out of every taint of sin depends mainly on the particular manner of performing the rite, and the principal charm to the black women in the ceremony of total immersion consists in decking themselves out in white robes, like brides, and having their shoes trimmed with silver. They well know that the waters of the Altamaha are chilly, and that they and the officiating minister run no small risk of catching cold, but to this penance they most cheerfully submit.

Of dancing and music the negroes are passionately fond. On the Hopeton plantation above twenty violins have been silenced by the Methodist missionaries, yet it is notorious that the slaves were not given to drink or intemperance in their merry-makings.

At the Methodist prayer-meetings, they are permitted to move round rapidly in a ring, joining hands in token of brotherly love, presenting first the right hand and then the left, in which manœuvre, I am told, they sometimes contrive to take enough exercise to serve as a substitute for the dance, it being, in fact, a kind of spiritual *boulanger*, while the singing of psalms, in and out of chapel, compensates in no small degree for the songs they have been required to renounce.

However much we may feel inclined to smile at some of these outward tokens of conversion, and however crude may be the notions of the Deity which the poor African at first exchanges for his belief in the evil eye and other superstitious fears, it is nevertheless an immense step in his progress toward civilization that he should join some Christian sect. Before he has time to acquire high conceptions of his Creator, or to comprehend his own probationary state on earth, and his moral and religious duties, it is no small gain that he should simply become a member of the same church with his master, and should be taught that the white and colored man are equal before God, a doctrine calculated to raise him in his own opinion, and in that of the dominant race.

Until lately the humblest slave who joined the Methodist or Baptist denomination could feel that he was one of a powerful association of Christians, which numbered hundreds of thousands of brethren in the northern as well as in the southern states. He could claim many schools and colleges of high repute in New England as belonging to his own sect, and feel proud of many celebrated writers whom they have educated. Unfortunately, a recent separation, commonly called "the north and south split," has severed these bonds of fellowship and fraternity, and for the sake of renouncing brotherhood with slave-owners, the northern churches have repudiated all communion with the great body of their negro fellow Christians. What effect can such estrangement have on the mind, whether of master or slave, favorable to the cause of emancipation? The slight thrown on the aristocracy of planters has no tendency to conciliate them, or lead them to assimilate their sentiments to those of their brethren in the

faith, with whom formerly, throughout the northern and free states, they had so intimate a connection ; and as for the slaves, it is to them a positive loss to be thus rejected and disowned. The rank and position of the negro preachers in the south, whether Baptist or Methodist, some of them freemen, and of good abilities, is decidedly lowered by the severance of the northern churches, which is therefore adverse to the gradual advancement of the African race, which can alone fit them for manumission.

Some of the planters in Glynn County have of late permitted the distribution of Bibles among their slaves, and it was curious to remark that they who were unable to read were as anxious to possess them as those who could. Besides Christianizing the blacks, the clergy of all sects are doing them incalculable service, by preaching continually to both races that the matrimonial tie should be held sacred, without respect to color. To the dominant race one of the most serious evils of slavery is its tendency to blight domestic happiness ; and the anxiety of parents for their sons, and a constant fear of their licentious intercourse with slaves, is painfully great. We know but too much of this evil in free countries, wherever there is a vast distance between the rich and poor, giving a power to wealth which insures a frightful amount of prostitution. Here it is accompanied with a publicity which is keenly felt as a disgrace by the more refined of the white women. The female slave is proud of her connection with a white man, and thinks it an honor to have a mulatto child, hoping that it will be better provided for than a black child. Yet the mixed offspring is not very numerous. The mulattoes alone represent nearly all the illicit intercourse between the white man and negro of the living generation. I am told that they do not constitute more than two and a half per cent. of the whole population. If the statistics of the illegitimate children of the whites born here could be compared with those in Great Britain, it might lead to conclusions by no means favorable to the free country. Here there is no possibility of concealment, the color of the child stamps upon him the mark of bastardy, and transmits it to great-grand-children born in lawful wedlock ; whereas if, in Europe, there was some mark or indelible stain betraying all the delin-

quencies and frailties, not only of parents, but of ancestors for three or four generations back, what unexpected disclosures should we not witness!

There are scarcely any instances of mulattoes born of a black father and a white mother. The colored women who become the mistresses of the white men are neither rendered miserable nor degraded, as are the white women who are seduced in Europe, and who are usually abandoned in the end, and left to be the victims of want and disease. In the northern states of America there is so little profligacy of this kind, that their philanthropists may perhaps be usefully occupied in considering how the mischief may be alleviated south of the Potomac; but in Great Britain there is so much need of reform at home, that the whole thoughts and energies of the rich ought to be concentrated in such schemes of improvement as may enable us to set an example of a higher moral standard to the slave-owning aristocracy of the Union.

On one of the estates in this part of Georgia, there is a mulatto mother who has nine children by a full black, and the difference of shade between them and herself is scarcely perceptible. If the white blood usually predominates in this way in the second generation, as I am told is the case, amalgamation would proceed very rapidly, if marriages between the races were once legalized; for we see in England that black men can persuade very respectable white women to marry them, when all idea of the illegality and degradation of such unions is foreign to their thoughts.

Among the obstacles which the Christian missionaries encounter here when they teach the virtue of chastity, I must not omit to mention the loose code of morality which the Africans have inherited from their parents. My wife made the acquaintance of a lady in Alabama, who had brought up with great care a colored girl, who grew up modest and well-behaved, till at length she became the mother of a mulatto child. The mistress reproached her very severely for her misconduct, and the girl at first took the rebuke much to heart; but having gone home one day to visit her mother, a native African, she returned, saying,

that her parent had assured her she had done nothing wrong, and had no reason to feel ashamed. When we are estimating, therefore, the amount of progress made by the American negroes since they left their native country, we ought always to bear in mind from how low a condition, both morally and intellectually considered, they have had to mount up.

END OF THE FIRST VOLUME.

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